

The Various Uses of Spinal Needles

Joseph Eldor, MD

[J Spinal Disord Tech](#). 2013 Jul 26. [Epub ahead of print]

Avoidance of Wrong-Level Thoracic Spine Surgery Using Sterile Spinal Needles.

[Chin KR](#), [Jason Seale M](#), [Vanessa Cumming M](#).

Source

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Abstract

STUDY DESIGN:

A technical report.

OBJECTIVE:

To present an improvement on localization techniques employed for use in the thoracic spine using sterile spinal needles docked on the transverse process of each vertebra, which can be performed in both percutaneous and open spinal procedures.

SUMMARY OF BACKGROUND DATA:

Wrong level surgery may have momentous clinical and emotional implications for a patient and surgeon. It is reported that one in every two spine surgeons will operate on the wrong level during his or her career. Correctly localizing specific thoracic level remains a significant challenge during spine surgery.

METHODS::

Fluoroscopic anteroposterior and lateral views were obtained starting in the lower lumbar spine and an 18-gauge spinal needle was placed in the transverse process of L3 counting up from the sacrum and also at T12. The fluoroscopy was then moved cephalad and counting from the spinal needle at T12 the other spinal needles were placed at the targeted operating thoracic vertebrae. Once this was done, we were able to accurately determine the thoracic levels for surgical intervention.

RESULTS::

Using this presented technique, the markers were kept in place even after the incisions were made. This prevented us from losing our location in the thoracic spine. Correctly placed instrumentation was made evident with postoperative imaging.

CONCLUSION:

We have described the successful use of a new technique using spinal needles docked against transverse processes to correctly and reliably identify thoracic levels prior to instrumentation. The technique was reproducible in both open surgeries and for a percutaneous procedure. This technique maintains the correct spinal level during an open procedure. We posit that wrong level thoracic spine surgery may be preventable.

[Arch Plast Surg](#). 2013 May;40(3):256-8. doi: 10.5999/aps.2013.40.3.256. Epub 2013 May 16.

Subcision using a spinal needle cannula and a thread for prominent nasolabial fold correction.

[Lee SY](#), [Sung KY](#).

Source

Department of Plastic and Reconstructive Surgery, Kangwon National University College of Medicine, Chuncheon, Korea.

Abstract

Deepening of the nasolabial crease is an esthetically displeasing aging phenomenon occurring in the midface. Various treatment modalities have been introduced to improve the appearance of prominent nasolabial folds, all of which have pros and cons. Currently, a minimally invasive technique using synthetic dermal fillers is most commonly used. A simple and easy subcision procedure using a wire scalpel has also been used and reported to be effective for prominent nasolabial fold correction, with minimal complications. As an alternative to the wire scalpel, we used a 20-gauge metal type spinal needle cannula (Hakko Co.) and 4-0 Vicryl suture (Ethicon Inc.) for subcision of nasolabial folds. This technique is less expensive than the use of a wire scalpel and easily available when needed. Therefore, on the basis of favorable results, our modified subcision technique may be considered effective for prominent nasolabial fold correction.

[Arthrosc Tech](#). 2012 Oct 5;1(2):e193-9. doi: 10.1016/j.eats.2012.07.006. Print 2012 Dec.

ORV Arthroscopic Transosseous Bony Bankart Repair.

[Myer DM](#), [Caldwell PE 3rd](#).

Source

Orthopaedic Research of Virginia, Richmond, Virginia, U.S.A.

Abstract

The arthroscopic treatment of the "bony Bankart lesion" continues to evolve. We present a novel technique that we developed at Orthopaedic Research of Virginia, the "transosseous bony Bankart repair," which incorporates several essential concepts to provide for optimal healing and rehabilitation. We promote arthroscopic repair emphasizing bone preservation, a fracture interface without interposing sutures, the ability to reduce capsular volume, and multiple points of stable glenolabral fixation. Our technique positions suture anchors within the subchondral bone of the intact glenoid to allow for an anatomic reduction of the bony fragment. By use of an arthroscopic drill, spinal needle, and nitinol suture passing wire, the sutures are passed in a retrograde fashion through the bony Bankart fragment and anterior capsule in a mattress configuration. Additional inferior and superior anchors are placed to further provide stability and reduce capsular volume. While maximizing fracture surface area and optimizing bony healing, the end result is an anatomic reduction of the bony fragment and the glenoid articular surface.

[Muscles Ligaments Tendons J.](#) 2013 Jan 21;2(4):305-8. Print 2012 Oct.

Infra-patellar fat pad cysts: a case report and review of the literature.

[Bisicchia S](#), [Savarese E](#).

Source

Department of Orthopaedic Surgery University of Rome Tor Vergata, Italy.

Abstract

Infra-patellar fat pad cysts are an uncommon type of intra-articular ganglia. We report a case of a young woman with a painful little mass in the anterior aspect of the left knee. Ultrasound revealed a multiloculate cyst, that was initially drained with a spinal needle. Four months later, she had a recurrence of symptoms and a ultrasound guided aspiration was performed. Cytological examination revealed synovial cells, synovial fluid, macrophages and debris: diagnosis was ganglion cyst. We reviewed the literature about infra-patellar fat pad cysts. Clinical diagnosis of an intraarticular cyst is very difficult, but sometimes an infra-patellar fat pad cyst could be suspected because it could be visible and palpable. MRI is the best diagnostic option in all cases. There are several treatment option, operative or conservative. In our opinion ultrasound guided aspiration is the treatment of choice in symptomatic ganglia, because it allows to drain all lacunae, preventing recurrence.

[Head Neck.](#) 2012 Oct;34(10):1465-9.

Topographic description of an alternative insertion technique for percutaneous approach of cricopharyngeus muscle electromyography: a cadaveric and clinical study.

[Akkin SM](#), [Alkan Z](#), [Yigit O](#), [Adatepe T](#), [Demirci MS](#), [Koebke J](#), [Uzun N](#).

Source

Department of Anatomy, Cerrahapasa Medical Faculty, Istanbul University, Istanbul, Turkey.

Abstract

BACKGROUND:

Cricopharyngeus is the only muscle for which electromyography is used in the differential diagnosis of swallowing disorders. Because of some practical difficulties, electrophysiologic tests for this muscle are not performed routinely. Thus we aimed to describe an alternative topographic way to reach the muscle easily.

METHODS:

On 10 cadavers, a spinal needle (20 G) and on 37 patients a concentric needle electrode (26 G) were used. The needle was inserted percutaneous at the level of the superior border of the cricoid cartilage, anterior to the anterior border of the sternocleidomastoid muscle at 60 degrees angle to the frontal plane in the posteromedial direction.

RESULTS:

We reached the muscle in all cadavers. In all of the patients, the needle entered the muscle on the first attempt; that was confirmed by electromyographic responses.

CONCLUSION:

Our results show that this method can be useful for the practical application of cricopharyngeus muscle electromyography.

[J Cosmet Laser Ther.](#) 2013 Aug;15(4):228-30. doi: 10.3109/14764172.2013.769761. Epub 2013 Mar 6.

Macrolane (large particle biphasic hyaluronic acid) filler injection for correction of defect contour after liposuction.

[Cerqua S](#), [Angelucci F](#).

Source

Clinic "Villa Margherita", Viale di Villa Massimo , Rome , Italy.

Abstract

Abstract In a minority of patients undergoing liposuction, superficial irregularities (or skin depression) in the operated area may occur. Macrolane is a gel composed of hyaluronic acid (HA), used for volume restoration of soft tissues. In this study, the authors investigated the effectiveness, maintenance, and safety of Macrolane as a "non-surgical" treatment to correct skin depression after liposuction. Twelve female patients were included. Macrolane was injected at a subdermal superficial plane using an intramuscular or spinal needle. In all patients, Macrolane was successful in correcting skin depression. No relevant side effects were observed. At 8 months post-injection, a persistence of correction of 60-70% was still present in 90% of the patients. In conclusion, Macrolane filler injections are a predictable, safe, and long-lasting non-surgical procedure to fill contour defects that arise after liposuction, and represent a good option for patients who refuse to undergo an additional surgery to fill the arisen skin depressions.

[J Obstet Gynaecol India.](#) 2012 Feb;62(1):20-4. doi: 10.1007/s13224-012-0152-x. Epub 2012 Apr 20.

Indications of 1342 fetal cord blood sampling procedures performed as an integral part of high risk pregnancy care.

[Deka D](#), [Dadhwal V](#), [Roy KK](#), [Malhotra N](#), [Vaid A](#), [Mittal S](#).

Source

Department of Obstetrics & Gynecology, All India Institute of Medical Sciences, Room No 3073, 3rd Floor Teaching Block, Ansari Nagar, New Delhi, 110029 India.

Abstract

BACKGROUND:

Fetal umbilical cord blood sampling is now being performed worldwide, using an ultrasound guided technique, for prenatal diagnosis in pregnancies at high risk for several congenital and genetic defects in the fetus. Awareness of feasibility of the procedure and indications for the same should be known to every obstetrician.

AIMS AND OBJECTIVES:

To study the indications for Fetal Cord Blood Sampling in high risk pregnancy patients in the last 20 years at a tertiary referral center in India.

MATERIALS AND METHODS:

Women referred to the Fetal Medicine Clinic for fetal blood sampling from January 1990 to November 2009, were assessed. An informed consent was taken. Under continuous

ultrasound guidance, a 22 gauge long spinal needle was inserted through the maternal abdomen and uterine wall into the umbilical cord, and about 2-4 ml of blood, depending on the indication was aspirated by syringe. The various indications for fetal blood sampling in 1342 women were analyzed.

RESULTS:

Cord blood sampling was performed for the following indications: Hb in Rh Isoimmunized pregnancies-553 cases, Chromosomal analysis-427 cases, non-immune hydrops/pleural effusion/ascites-cases 88, Congenital Infections-131 cases, Intrauterine Growth Restriction-51 cases, Thalassemia-53 cases, Hemophilia-36 cases, and for Thyroid function test for fetal goiter in 3 cases, in total 1,342 women.

CONCLUSION:

There were several absolute indications for fetal cord blood sampling in high risk pregnant women, to provide state-of-the-art information on the health of the fetus. Awareness of the procedure and indications for the same should be known to every obstetrician as it is technically feasible, expertise is available in India; so that women who require the procedure may be referred in time.

[J Laparoendosc Adv Surg Tech A](#). 2013 Feb;23(2):85-90. doi: 10.1089/lap.2012.0241. Epub 2012 Nov 30.

Laparoendoscopic transgastric histoacryl injection of gastric varices: a new surgical approach.

[Kassem MI](#), [El-Haddad HM](#), [El-Bahrawi HA](#).

Source

Gastrointestinal Surgical Unit, General Surgery Department, Faculty of Medicine, University of Alexandria, Alexandria, Egypt. dr_m_kassem@yahoo.com

Abstract

BACKGROUND:

Gastric varices (GVs) are a common finding in Egyptian patients with portal hypertension due to cirrhosis or schistosomal hepatic fibrosis. These patients present with an acute attack or history of hematemesis. Endoscopic histoacryl injection is the standard treatment in Egypt; however, because of technical difficulties it is possible to inject only a little amount of this material, as it may endanger the channels of the flexible endoscope. We thought of a new surgical laparoendoscopic technique to obviate the need for repeated endoscopies and complete obliteration of GV's.

PATIENTS AND METHODS:

This study was conducted on 20 patients with portal hypertension and GV's. After the patient was placed under general anesthesia, a small gastrotomy was done in the anterior gastric wall through which a 10-mm trocar was inserted for the laparoscopic camera. Injection of GV's was done via a spinal needle or a central venous line needle inserted directly. Injection of an adequate amount of histoacryl was done under direct vision.

RESULTS:

This study was conducted from July 2009 to August 2011 on 20 patients with GV's. The age range was from 22 to 56 years, with a mean age of 39.8 ± 7.85 years. There were 14 men (70%) and 6 women (30%). Fourteen patients (70%) showed complete obliteration of GV's after one session of treatment, whereas 6 patients (30%) had unsatisfactory results and were

subjected to another session. GVs were completely obliterated after the second session in 4 patients. Two cases of recurrence of GVs were operated on.

CONCLUSIONS:

This new technique enabled us to inject GVs with a suitable amount of glue material under direct vision without harming the endoscope. Use of this procedure is recommended in patients fit for surgery and those who had failed endoscopic injection sclerotherapy.

[Pain Physician](#). 2012 Nov-Dec;15(6):515-23.

Digital subtraction angiography does not reliably prevent paraplegia associated with lumbar transforaminal epidural steroid injection.

[Chang Chien GC](#), [Candido KD](#), [Knezevic NN](#).

Source

Rehabilitation Institute of Chicago, Department of Physical Medicine and Rehabilitation, Feinberg School of Medicine, Northwestern University, Chicago, IL, USA.

Abstract

Digital subtraction angiography (DSA) has been touted as a radiologic adjunct to interventional neuraxial procedures where it is imperative to identify vascular compromise during the injection. Transforaminal epidural steroid injections (TFESI) are commonly performed interventions for treating acute and chronic radicular spine pain. We present a case of instantaneous and irreversible paraplegia following lumbar TFESI wherein a local anesthetic test dose, as well as DSA, were used as adjuncts to fluoroscopy. An 80-year-old man with severe lumbar spinal stenosis and chronic L5 radiculopathic pain was evaluated at a university pain management center seeking symptomatic pain relief. Two prior lumbar interlaminar epidural steroid injections (LESI) provided only transient pain relief, and a decision was made to perform right-sided L5-S1 TFESI. A 5-inch, 22-gauge Quincke-type spinal needle with a curved tip was used. Foraminal placement of the needle tip was confirmed with anteroposterior, oblique, and lateral views on fluoroscopy. Aspiration did not reveal any blood or cerebrospinal fluid. Digital subtraction angiography was performed twice to confirm the absence of intravascular contrast medium spread. Subsequently, a 0.5 mL of 1% lidocaine test dose was performed without any changes in neurological status. Two minutes later, a mixture of one mL of 1% lidocaine with 80 mg triamcinolone acetonide was injected. Immediately following the completion of the injection, the patient reported extreme bilateral lower extremity pain. He became diaphoretic, followed by marked weakness in his bilateral lower extremities and numbness up to his lower abdomen. The patient was transferred to the emergency department for evaluation. Magnetic resonance imaging (MRI) of the lumbar and thoracic spine was completed 5 hours postinjection. It showed a small high T2 signal focus in the thoracic spinal cord at the T7-T8 level. The patient was admitted to the critical care unit for neurological observation and treatment with intravenous methylprednisolone. Follow-up MRI revealed a hyper-intense T2 and short-tau inversion recovery signal in the central portion of the spinal cord beginning at the level of the T6 superior endplate and extending caudally to the T9-T10 level with accompanying development of mild spinal cord expansion. The patient was diagnosed with paraplegia from acute spinal cord infarction. At discharge to an acute inpatient rehabilitation program, the patient had persistent bilateral lower extremity paralysis, and incontinence of bowel and bladder functions. In the present patient, DSA performed twice and an anesthetic test dose did not prevent a catastrophic spinal cord infarction and resulting paraplegia. DSA use is clearly not foolproof and may not be sufficient to identify potentially life-or-limb threatening

consequences of lumbar TFESI. We believe that this report should open further discussion regarding adding the possibility of these catastrophic events in the informed consent process for lumbar TFESIs, as it has for cervical TFESI. Utilizing blunt needles or larger bevel needles in place of sharp, cutting needles may minimize the chances of this event occurring. Considering eliminating use of particulate steroids for TFESI should be evaluated, although the use of nonparticulate agents remains controversial due to the perception that their respective duration of action is less than that of particulate steroids.

[Clin Orthop Relat Res.](#) 2013 Apr;471(4):1277-82. doi: 10.1007/s11999-012-2627-6. Epub 2012 Oct 10.

Surgical technique: arthroscopic treatment of heterotopic ossification of the hip after prior hip arthroscopy.

[Ong C](#), [Hall M](#), [Youm T](#).

Source

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Abstract

BACKGROUND:

The incidence of heterotopic ossification (HO) after hip arthroscopy reportedly ranges from less than 1.0% to 6.3%. Although open debridement has been described and a few series mention arthroscopic debridement, the techniques for arthroscopic excision of HO have not been described in detail. We describe the arthroscopic treatment of this complication.

DESCRIPTION OF TECHNIQUE:

Revision arthroscopy was completed in the central and peripheral compartments using prior portals and fluoroscopy was used to identify the HO. Spinal needle localization was used to triangulate onto the HO. Cannulas were inserted over the spinal needle. Once the HO was clearly identified with the arthroscope, it was excised using a burr and confirmed on fluoroscopy.

METHODS:

We retrospectively reviewed 66 patients who underwent arthroscopic treatment of femoroacetabular impingement between July 2008 and June 2010. There were 36 females and 30 males with an average age of 38 years (range, 15-68 years). Eight of the 66 (12%) patients had HO develop. Using the grading of Brooker et al., six patients had Grade 1, one had Grade 2, and one had Grade 3 HO. Three patients with HO were symptomatic and underwent arthroscopic resection. We obtained modified Harris hip scores (HHS) and radiographs at followup. The minimum followup for the three patients with revision surgery was 2 years (mean, 2 years 2 months; range, 2 years-2 years 8 months).

RESULTS:

The three patients who underwent arthroscopic resection had HHS ranging from 85 to 96 at last followup. No patient had recurrence of HO.

CONCLUSIONS:

Our data suggest HO is not uncommon after hip arthroscopy for the treatment of femoroacetabular impingement but most patients have minor degrees and no symptoms. In symptomatic patients, arthroscopic excision appears to relieve pain and restore function

[Orthop Surg.](#) 2012 May;4(2):109-13. doi: 10.1111/j.1757-7861.2012.00177.x.

Arthroscopic rotator cuff repair with augmentation: the V-sled technique.

[Chillemi C](#), [El Boustany S](#), [Giudici LD](#), [Ippolito G](#).

Source

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Abstract

Numerous techniques have been described for patch positioning in rotator cuff shoulder arthroscopic surgery. These techniques seem to be difficult challenges for the majority of arthroscopic surgeons, and because of that they are called "highly demanding" techniques. Without the use of dedicated instruments and cannulas, the authors propose a V-sled technique that seems to be more reproducible, quicker and less difficult to perform for arthroscopic shoulder surgeons. The patient is placed in the lateral position. All arthroscopic procedures are performed without the use of cannulas. The standard posterior portal is used for the glenohumeral (GH) joint arthroscopy with fluid inflowing through the scope. After an accurate evaluation of the GH space, the scope is then introduced into the subacromial space. With the use of a spinal needle, a lateral portal is performed. The great tuberosity is prepared with a bur to place two 5.5 mm triple-loaded radiolucent anchors. In addition, two free high strength sutures are passed through the muscle, respectively. The repair is performed using two high strength sutures from each anchor. The third wire from each anchor is retrieved out of the accessories portals used for the insertion of the anchors. In addition, two free high strength sutures are passed through the muscle, and the patch sizing is done using a measuring probe introduced through the lateral portal. Next, the patch is then prepared and is introduced into the subacromial space, and then the patch is stabilized, and the free sutures are tied.

[Am J Sports Med.](#) 2012 Apr;40(4):864-9. doi: 10.1177/0363546512437152. Epub 2012 Feb 28.

Labral penetration rate in a consecutive series of 300 hip arthroscopies.

[Domb B](#), [Hanypsiak B](#), [Botser I](#).

Source

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Abstract

BACKGROUND:

Intraoperative labral injury during the establishment of the first portal in hip arthroscopy has been reported to be as high as 20%.

PURPOSE:

The purpose of the study was to prospectively identify the incidence of acetabular labral injuries that occurred while using a current technique for the establishment of portals during hip arthroscopy.

STUDY DESIGN:

Case series; Level of evidence, 4.

METHODS:

Between the years 2008 and 2010, data were prospectively collected for all patients undergoing hip arthroscopic surgery. Patients with previous labral resection or Tonnis grade greater than 1 were excluded. Patients were positioned supine, traction was applied, and portals were established. The anterolateral portal was created first by venting the joint with a spinal needle and then re-entering the joint with the same needle with the bevel side facing the labrum. Next, the midanterior portal was created under vision. A thorough examination of the acetabular labrum was conducted arthroscopically through multiple viewing portals, and labral injuries related to the establishment of portals were identified and noted.

RESULTS:

A total of 300 patients were included in the study; only 2 patients (0.67%) suffered intraoperative labral injuries at the study period. One injury occurred during revision arthroscopy, while the second involved a hyperplastic labrum in a dysplastic hip. No patient with normal hip morphological characteristics undergoing a hip arthroscopy suffered a labral tear as a result of portal placement.

CONCLUSION:

The incidence of iatrogenic labral injury during hip arthroscopy can be as low as 0.67% when using the described technique.

[J Anaesthesiol Clin Pharmacol](#). 2011 Oct;27(4):481-4. doi: 10.4103/0970-9185.86591.

The analgesic efficacy of peritubal infiltration of 0.25% bupivacaine in percutaneous nephrolithotomy - A prospective randomized study.

[Parikh GP](#), [Shah VR](#), [Modi MP](#), [Chauhan NC](#).

Source

Department of Anaesthesia and Critical Care, Smt. K.M. Mehta and Smt. G.R. Doshi Institute of Kidney Diseases and Research Center, Dr. H.L. Trivedi Institute of Transplantation Sciences, Ahmedabad, Gujarat, India.

Abstract

BACKGROUND:

Percutaneous nephrolithotomy is a routine endourologic procedure in patients with renal stones. Although it is less painful than open surgery, good postoperative analgesia is required to alleviate pain around nephrostomy tube.

MATERIALS AND METHODS:

Sixty ASA grade I patients, 18 to 60 years of age, of either sex were randomized to receive 20 ml of 0.25% bupivacaine (group S) or 20 ml of normal saline (group C) through 23-gauge spinal needle along the nephrostomy tube under fluoroscopic guidance at the end of the surgery. Postoperative pain score was assessed by visual and dynamic visual analog scores. When the scores were ≥ 4 , rescue analgesia was given in the form of tramadol 1 mg/kg i.v. upto maximum 400 mg in 24 hours. Time to first demand analgesia and total dose of tramadol in first 24 hours was noted.

RESULTS:

Pain scores at rest and during coughing as well as rescue analgesic requirements for first 24 hours were significantly less in the bupivacaine group than those of the control group ($P < 0.05$). The first request for demand analgesia was around 9 hours in group S, while in group

C it was around 2.6 hours ($P < 0.05$). Total requirement of tramadol in group S was 119.3 mg and in C group it was 276.8 mg ($P < 0.05$).

CONCLUSION:

Peritubal infiltration of 0.25% bupivacaine is efficient in alleviating postoperative pain after PCNL.

[Agri](#). 2011 Jul;23(3):129-33. doi: 10.5505/agri.2011.86648.

[Application of ganglion impar block in patient with coccyx dislocation].

[Article in Turkish]

[Sağır O](#), [Ozaslan S](#), [Köroğlu A](#).

Source

Department of Anesthesiology and Reanimation, Balıkesir, Turkey. ozlemsagir@yahoo.com

Abstract

Sacrococcygeal dislocation is a rare injury. The ganglion impar (also called the ganglion of Walther) is a single, small solitary, sympathetic ganglion located in the retrorectal space, anterior to the sacrococcygeal joint or coccyx. It provides the nociceptive and sympathetic supply to the perineal structure. Ganglion impar blockade is not a routinely used anesthetic and analgesic procedure in clinical practice. An elective intrarectal manuel treatment was planned for a woman patient with coccyx dislocation due to falling down from a chair 5 days ago. Ganglion impar block was performed with sacrococcygeal approach using 22 gauge spinal needle along with fluoroscopy following routine monitorization. Blood pressure, heart rate, peripheral oxygen saturation and visual analog scale (VAS) were recorded before and, after block with three minute intervals. VAS value of the patient, 8 before the procedure, decreased 50% 6 minutes after block. Intrarectal manuel treatment was applied to the patient with VAS of 0 at 9th minute. Hemodynamic values were within normal limits during and after the procedure and no motor block was observed. The patient with VAS of 0 at 2nd and 6th hour after block was discharged. VAS of 0 was determined at 24th and 48th hour by phone call. In conclusion, ganglion impar block provided adequate analgesia without causing any complications during and after the intrarectal manuel treatment for the patient with coccyx dislocation. However, we believe that further clinical studies are required to establish the safety and efficiency of this technique for other procedures at perianal region.

[Otol Neurotol](#). 2011 Sep;32(7):1152-7. doi: 10.1097/MAO.0b013e31822a1ce2.

Progression of endolymphatic hydrops in Ménière's disease as evaluated by magnetic resonance imaging.

[Fiorino F](#), [Pizzini FB](#), [Beltramello A](#), [Barbieri F](#).

Source

Department of Otolaryngology, Ospedale Civile Maggiore, Azienda Ospedaliera Universitaria Integrata, Verona, Italy. franco.fiorino@virgilio.it

Abstract

OBJECTIVE:

To evaluate the presence and the degree of endolymphatic hydrops (EHs) in patients with unilateral Ménière's disease (MD), as a function of duration of the disease, estimated using a 3-dimensional fluid-attenuated inversion recovery sequence in a 3-Tesla magnetic resonance imaging unit, after intratympanic gadolinium administration.

PATIENTS:

A total of 32 patients (21 male and 11 female subjects, aged 25-78 yr; median, 56 yr) participated in the investigation. The duration of the disease ranged from 2 months to 10 years (median, 3 yr), with a prevalence of vertigo spells in the last 6 months ranging from 0.5 to 8 per month (median, 2.5).

INTERVENTION:

A 0.6-ml solution of gadobutrol (1 mmol/ml) diluted 1:7 in saline was injected in the affected ear through the inferior-posterior quadrant of the tympanic membrane, using a 22-gaugespinal needle. The patient was kept with the head rotated 45 degrees contralaterally for 30 minutes after each injection. Twenty-four hours later, a 3-dimensional fluid-attenuated inversion recovery magnetic resonance imaging was performed.

MAIN OUTCOME MEASURE:

Perilymphatic enhancement was evaluated in different portions of the labyrinth as a function of MD duration.

RESULTS:

Reduced or absence of enhancement of the vestibule occurred precociously and occurred in all subjects at long term. The prevalence of enhancement abnormalities in the cochlea and the semicircular canals was directly proportional to MD duration. At long term, the vestibule and the cochlea showed a more severe hydropic involvement compared with semicircular canals. A statistical significant correlation between enhancement abnormalities and MD duration was observed for most inner ear sites.

CONCLUSION:

The increased prevalence and severity of EH with the duration of MD indicates that hydrops is a progressive degenerative phenomenon. The frequent abnormality in the vestibule and, secondarily, in the cochlea is in line with some histopathologic investigations. It remains to be clarified whether hydropic changes are related to specific signs and symptoms of MD.

[Urology](#). 2011 Aug;78(2):257-60. doi: 10.1016/j.urology.2011.03.010. Epub 2011 May 23.

A prospective, randomized controlled study comparing lidocaine and tramadol in periprostatic nerve blockage for transrectal ultrasound-guided prostate biopsy.

[Seçkiner I](#), [Sen H](#), [Erturhan S](#), [Yağcı F](#).

Source

Department of Urology, University of Gaziantep, Gaziantep, Turkey. iseckiner@yahoo.com

Abstract

OBJECTIVES:

To assess the efficacy of tramadol and lidocaine in reducing pain using the periprostatic nerve block technique with a spinal needle, guided by transrectal ultrasound (TRUS) before the biopsy application.

METHODS:

Of the 112 eligible candidates who were asked to participate in the study, 90 agreed and provided informed consent. These 90 men were randomized into 3 groups. Group 1 (n = 30) received lidocaine, group 2 (n = 29) received tramadol, and group 3 (n = 31) received saline solution. Within 10 minutes of biopsy procedure completion, the patients were presented with visual pain scales and asked to rate the pain. The patients also asked whether they would be to return for this procedure if it became medically necessary.

RESULTS:

The postprocedural mean pain scores of lidocaine, tramadol, and placebo groups were found to be 1.73, 2.89, and 4.32, respectively. The mean pain scores were significantly lower in both the lidocaine and the tramadol groups compared with the placebo group ($P < .001$). In addition, statistically significant differences were found among the 3 groups regarding how willing they would be to return for the procedure if necessary.

CONCLUSIONS:

In this study, we showed that the local anesthetic effect of tramadol in decreasing pain in periprostatic nerve block during TRUS-guided biopsy. The use of tramadol for pain relief in transrectal ultrasound-guided prostate biopsy is a practical, effective, and comfortable method compared with the results of the control group.

[J Endourol.](#) 2011 May;25(5):743-5. doi: 10.1089/end.2010.0375. Epub 2011 Apr 11.

Real-time tomographic reflection in facilitating percutaneous access to the renal collecting system.

[Chen ML](#), [Shukla G](#), [Jackman SV](#), [Tsao AK](#), [Smaldone MC](#), [Ost MC](#), [Stetten GD](#), [Averch TD](#).

Source

Department of Urology, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania 15213, USA. chenml@upmc.edu

Abstract

BACKGROUND AND PURPOSE:

Real-time tomographic reflection is a novel technique that uses a geometrically fixed arrangement of a conventional ultrasound transducer, a transducer-incorporated monitor, and a half-silvered mirror. This device, dubbed the Sonic Flashlight, generates a virtual anatomically scaled image, obviating the need for a separate monitor. It may therefore facilitate invasive procedures, such as percutaneous access to the kidney. This proof-of-concept study assesses the feasibility of this technique for renal imaging and concomitant needle puncture guidance.

MATERIALS AND METHODS:

In a swine model with induced hydronephrosis, the Sonic Flashlight was used to visualize and guide needle access to the renal pelvis. Passage of a 7-inch, 18-gaugespinal needle was performed. Entry into the collecting system was confirmed by the aspiration of urine.

RESULTS:

The anechoic renal pelvis and hyperechoic needle tip could be seen with the Sonic Flashlight device. Successful access to the collecting system was obtained twice without difficulty. The sonographic image, appearing to emanate from the tip of the transducer, makes visualization and manipulation more intuitive. Furthermore, by placing the operator's eyes and hands in the same field as the sonogram, image-guided procedures are potentially easier to learn.

CONCLUSION:

The relatively shallow depth of penetration of the current device limits its clinical usefulness. A new Sonic Flashlight with a greater depth of penetration is in development.

[Vet Surg.](#) 2011 Jun;40(4):494-9. doi: 10.1111/j.1532-950X.2011.00821.x. Epub 2011 Mar 21.

Comparison of medial and lateral ultrasound-guided approaches for periarticular injection of the thoracolumbar intervertebral facet joints in horses.

[Cousty M](#), [Firidolfi C](#), [Geffroy O](#), [David F](#).

Source

Clinique Equine de Livet, Cour Samson, Saint Michel de Livet, France. cousty@celivet.com

Abstract

OBJECTIVE:

To compare ultrasound-guided lateral and medial approaches for periarticular injections of the thoracolumbar intervertebral facet joints (IFJ).

STUDY DESIGN:

Experimental cadaveric study.

SAMPLE POPULATION:

Adult equine cadavers (n=4).

METHODS:

g cm, 18 IFJ (T12-T13 to L5-L6) were identified by ultrasound (transducer perpendicular to the spine axis) and insertion of a 13 spinal needle mL latex was injected. Intraarticular deposition, distance of latex from the closest articular margin, and presence of latex in the multifidus muscle were established by dissection. monitored until bone contact using medial (right side) and lateral (left side) approaches. Number of needle insertions at each site, needle repositioning, and insertion depth were recorded. On bone contact 2

RESULTS:

cm of the closest articular margin. Needle insertion relative to the transducer (lateral, medial) had no effect on the distance from the latex to the closest articular margin and all injections were performed into the multifidus muscle. cm. Most injections (86%) were intraarticular and 96% were at or within 0.5 Of 96 attempts, only 1 site require reinsertion of the needle; however, 46% of the injections required needle repositioning. Mean \pm SD insertion depth was 8.5 ± 1.1

CONCLUSIONS:

Ultrasound-guidance facilitated accurate periarticular injection of thoracolumbar IFJ irrespective of using a medial or lateral approach.

[J Med Assoc Thai.](#) 2010 Dec;93(12):1406-14.

Intratympanic dexamethasone for refractory sudden sensorineural hearing loss.

[Hunchaisri N](#), [Chantapant S](#), [Srinangyam N](#).

Source

Department of Otolaryngology, Faculty of Medicine, Srinakharinwirot University, Bangkok, Thailand. niranhun@hotmail.com

Abstract

BACKGROUND:

The standard medical regimen for SSNHL is systemic steroid therapy. Unfortunately, some patients either do not or poorly respond to systemic steroids. Intratympanic administration of steroids has been suggested as an alternative to systemic therapy.

OBJECTIVE:

To determine if intratympanic dexamethasone injection (ITDI) is an effective treatment for sudden sensorineural hearing loss (SSNHL) in patients that systemic steroid treatment has failed.

MATERIAL AND METHOD:

A prospective, non-randomized, controlled study evaluated the hearing outcomes in 14 SSNHL patients treated with ITDI as compared with the outcome of seven patients not treated. Intratympanic dexamethasone was administered through a spinal needle under local anesthesia. ITDI was performed once every week for maximum of three sessions. Hearing was assessed immediately before the therapy and 4 weeks after the therapy.

RESULTS:

Hearing improvement was documented in six of 14 patients (43%) who underwent ITDI compare to none of the seven patients (0%) in no ITDI group. However, this was not statistically significant ($p = 0.055$).

CONCLUSION:

Intratympanic dexamethasone (ITDI) may have benefits for patients with SSNHL who failed systemic steroid therapy.

[Knee Surg Sports Traumatol Arthrosc.](#) 2011 Aug;19(8):1239-42. doi: 10.1007/s00167-011-1426-z. Epub 2011 Feb 11.

Advances in the three-portal technique for anatomical single- or double-bundle ACL reconstruction.

[Araujo PH](#), [van Eck CF](#), [Macalena JA](#), [Fu FH](#).

Source

Department of Orthopaedic Surgery, University of Pittsburgh, Pittsburgh, PA, 15213, USA.

Abstract

PURPOSE:

To describe the "three-portal technique for anatomical ACL single- or double-bundle reconstruction" and the arthroscopic viewing improvement provided by this technique.

METHODS:

A "high" anterolateral portal was placed 1 cm lateral to the patellar tendon and the most inferior portion of the portal at the level of the inferior pole of the patella. A "central" portal was placed using a spinal needle under arthroscopic visualization following the orientation of the previous ACL fibers. An accessory medial portal was also placed using a spinal needle respecting a 2-mm distance to the medial femoral condyle.

RESULTS:

The "high" anterolateral portal permitted a broad and unobstructed view of the ACL tibial attachment. The "central" portal allowed a straightforward view of the ACL femoral remnant

and bony landmarks in the intercondylar notch. The accessory medial portal enabled to reach the femoral native insertion site of the ACL.

CONCLUSION:

The three-portal technique provides a proper view of the soft tissue remnants and bony landmarks facilitating an anatomical positioning of the graft.

[Otol Neurotol](#). 2011 Apr;32(3):472-7. doi: 10.1097/MAO.0b013e31820e7614.

Reliability of magnetic resonance imaging performed after intratympanic administration of gadolinium in the identification of endolymphatic hydrops in patients with Ménière's disease.

[Fiorino F](#), [Pizzini FB](#), [Beltramello A](#), [Mattellini B](#), [Barbieri F](#).

Source

Department of Otolaryngology, Ospedale Civile Maggiore-Azienda Ospedaliera Universitaria Integrata, Verona, Italy. franco.fiorino@virgilio.it

Abstract

OBJECTIVE:

To evaluate the reliability of magnetic resonance imaging performed after intratympanic gadolinium administration in evidencing endolymphatic hydrops in patients with Ménière's disease (MD).

PATIENTS:

A total of 26 patients (18 male and 8 female subjects, aged 25-78 yr; median age, 56 yr) with definite MD and 12 subjects (8 male and 4 female subjects, aged 31-75 yr; median age, 51 yr) with various unilateral non-MD disorders of the inner ear were examined.

INTERVENTION:

A 0.6-ml solution of gadobutrol (1 mmol/ml), diluted 1:7 in saline, was injected in the affected ear through the inferior-posterior quadrant of the tympanic membrane, using a 22-gaugespinal needle. In 9 MD patients, the contralateral ear also was injected. The patient was kept with the head rotated 45 degrees contralaterally for 30 minutes after each injection. Twenty-four hours later, a 3-dimensional fluid-attenuated inversion recovery magnetic resonance imaging using a 3 Tesla unit was performed.

MAIN OUTCOME MEASURE:

Perilymphatic enhancement was evaluated in different portions of the labyrinth in MD ears and compared with the outcomes obtained in the non-MD ears.

RESULTS:

All MD ears showed impaired perilymphatic enhancement of variable degrees. No enhancement defects could be observed in all examined contralateral unaffected ear of the patients with MD, as well as in 11 of the 12 ears of the subjects with various unilateral non-MD disorders.

CONCLUSION:

Perilymphatic enhancement defect of variable degrees is observed in the pathologic ear of every patient with MD. The consistency of this phenomenon in MD ears and the complete enhancement in most of the ears without MD safely enable to attribute these findings to endolymphatic hydrops. It is likely in the near future that imaging may be used to achieve a certain diagnosis of MD in life.

[Sports Med Arthrosc Rehabil Ther Technol](#). 2010 Nov 9;2:28. doi: 10.1186/1758-2555-2-28.

A novel technique of rotator cuff repair using spinal needle and suture loop.

[Muzaffar N](#), [Yoon JR](#), [Kim YB](#).

Source

Hospital for Bone and Joint Surgery, Barzalla, Srinagar, Kashmir, India. drnasir@in.com.

Abstract

BACKGROUND:

We present a simple technique of arthroscopic rotator cuff repair using a spinal needle and suture loop.

METHODS:

With the arthroscope laterally, a spinal needle looped with PDS is inserted percutaneously into the shoulder posteriorly and penetrated through the healthy posterior cuff tear margin. Anteriorly, another spinal needle loaded with PDS is inserted percutaneously to engage the healthy tissue at the anterior tear margin. The suture in the anterior needle is then delivered into the suture loop of the posterior needle using a suture retriever. The posterior needle and loop are then pulled out carrying the anterior suture with it. The two limbs of this suture are then retrieved through a cannula for knotting. The same procedure is then repeated for additional suturing. Suture anchors placed over the greater tuberosity are used to complete the repair.

CONCLUSION:

This is an easy method of rotator cuff repair using simple instruments and lesser time, hence can be employed at centers with less equipment and at reduced cost to the patient.

[Equine Vet J](#). 2010 Nov;42(8):721-5. doi: 10.1111/j.2042-3306.2010.00080.x. Epub 2010 Aug 19.

A cadaver study comparing two approaches to perform a maxillary nerve block in the horse.

[Bardell D](#), [Iff J](#), [Mosing M](#).

Source

The Philip Leverhulme Equine Hospital, University of Liverpool, Cheshire, UK.
david.bardell@liv.ac.uk

Abstract

REASONS FOR PERFORMING STUDY:

Anaesthesia of the maxillary nerve of the horse has been described using several approaches, but sparse data exist to evaluate the accuracy of these methods.

OBJECTIVES:

This study compared 2 previously described approaches to the maxillary nerve to assess their relative accuracies.

METHODS:

Thirty severed heads from horse cadavers were arranged to approximate the position of a live horse. Methylene blue (0.25 or 0.1 ml) was injected using a 19 gauge 90 mm spinal needle by one of 2 approaches, the method used being randomly allocated in each instance. Method ANG: angulated needle insertion on the ventral border of the zygomatic process of the temporal bone and directed rostromedially. Method PER: needle inserted perpendicular to the skin surface, ventral to the zygomatic process of the malar bone, level with the temporal canthus of the eye. Accuracy of dye deposition was assessed following dissection. Placement was categorised as 'full hit' (complete nerve coverage or dye deposition centred on nerve), 'partial hit' (partial nerve discolouration but dye not centred on nerve) or 'miss' (no nerve discolouration). Deposition of dye relative to the nerve and whether injection was performed on the left or right side of the head was recorded. A Chi-squared test was performed to examine the relationship between the 2 methods. Results: Method ANG was performed 31 times, Method PER 28 times. Full hits were 10/31 (32%) vs. 9/28 (32%), partial hits 15/31 (49%) vs. 14/28 (50%) and misses 6/31 (19%) vs. 5/28 (18%) (Methods ANG vs. PER, respectively). Results were not statistically significantly different between the methods. Dye was deposited in the deep facial vein once by each method. Bone was contacted consistently with Method PER and 8/31 times with Method ANG.

CONCLUSION AND CLINICAL RELEVANCE:

Both methods appeared equivalent in terms of accuracy. Aspiration should always precede injection.

[J Laryngol Otol.](#) 2011 Feb;125(2):199-203. doi: 10.1017/S0022215110001957. Epub 2010 Oct 1.

Fixation of nasal bone grafts with interosseous wire: our technique.

[Sathe N](#), [Gaikwad N](#), [Wadkar G](#), [Thakare S](#).

Source

Department of ENT, Seth G S Medical College and King Edward Memorial Hospital, Parel, Mumbai, India. drneelam_s@yahoo.co.in

Abstract

BACKGROUND:

The use of interosseous wire to fix bone grafts is well known. Herein, we describe a technique for fixation of an iliac crest bone graft for nasal augmentation, using a stainless steel wire.

METHOD:

A hole in the cancellous part of the graft guides the wire exactly into a groove in the cortical part, preventing slippage and ensuring rigid fixation. The wire is then threaded through a hollow spinal needle passed underneath the skin envelope; this avoids a dorsal incision and thus minimises scarring, reduces the risk of graft exposure and improves the aesthetic result.

RESULTS:

This technique has two distinct advantages: prevention of wire slippage and avoidance of a dorsal nasal incision.

CONCLUSION:

The described method uses an interosseous wire for rigid bone graft fixation, without a dorsal incision. This prevents wire slippage; it also achieves a good cosmetic result by improving the nasal contour via a cantilever effect which raises the nasal tip.

[Pain Physician](#). 2010 Sep-Oct;13(5):451-6.

A treatment option for post-injection sciatic neuropathy: transsacral block with methylprednisolone.

[Eker HE](#), [Cok OY](#), [Aribogan A](#).

Source

Baskent University, Faculty of Medicine, Adana Teaching and Medical Research Center, Anesthesiology Department, Dadaloglu Mahallesi, Yuregir/Adana, Turkey.
evreneker@yahoo.com

Abstract

BACKGROUND:

Accidental intraneural injection induced nerve injury is an iatrogenic tragedy and intramuscular injection (IM) is the most common injury mechanism affecting the sciatic nerve. The most frequent presentation of sciatic nerve injury includes radicular pain and paresthesia with almost immediate onset of variable motor and sensory deficit.

OBJECTIVES:

Intraneural injection is a common injury mechanism of the sciatic nerve and generates neuropathic pain with inflammatory neuritis. Steroids inhibit the production of inflammatory mediators and reduce ectopic discharges on damaged neural membranes. The results of transsacral steroid injection on neuropathic pain in 5 patients with accidental sciatic nerve injury due to intraneural injection were presented in this report.

DESIGN:

Report of 5 cases.

DESCRIPTION OF CASES:

Five patients, 32, 34, 45, 54 and 70 years old respectively, complaining of severe neuropathic pain, paresthesia and progressive weakness of the lower extremity with difficulty in walking secondary to gluteal injection were admitted to the clinic. The symptoms were resistant to drug therapies. Electromyography disclosed axonal damage of the sciatic nerve. The initial examination of the patients revealed a Numeric Rating Scale (NRS) of 10, 10, 9, 9, and 10 respectively.

RESULTS:

Diagnostic block was performed through the unilateral S1-S2-S3 sacral foramina with 22-G spinal needle by 5 mL 1% lidocaine into each foramen. NRS scores decreased to 1, 2, 2, 2 and 1, respectively. One week later, the patients were administered 80 mg methylprednisolone with 1% lidocaine in 15 mL solution shared equally in each foramen. The patients were checked one month after therapeutic block and a full recovery was achieved in all patients.

CONCLUSION:

The neuropathic pain due to accidental intraneural injection of the sciatic nerve would be an acceptable indication for transsacral nerve block with corticosteroids in the treatment of sciatic neuropathic pain symptoms.

[Eur Arch Otorhinolaryngol](#). 2011 Feb;268(2):181-7. doi: 10.1007/s00405-010-1353-5. Epub 2010 Aug 10.

MRI performed after intratympanic gadolinium administration in patients with Ménière's disease: correlation with symptoms and signs.

[Fiorino F](#), [Pizzini FB](#), [Beltramello A](#), [Barbieri F](#).

Source

Department of Otolaryngology, Ospedale Civile Maggiore, Azienda Ospedaliera Universitaria Integrata, Verona, Italy franco.fiorino@virgilio.it

Abstract

The objective of the study was to compare the outcomes of a series of diagnostic parameters in Ménière's disease (MD) patients with the extent of endolymphatic hydrops (EH) as shown by magnetic resonance imaging (MRI) performed after intra-tympanic gadolinium administration using 18 patients (13 males and 5 females, age 25-78 years, median age 54.3 years) with definite MD. A 0.6-ml solution of Gadobutrol (1 mmol/ml) diluted 1:7 in saline was injected through the inferior-posterior quadrant of the tympanic membrane, using a 22-gauge spinal needle. The patient was kept with the head rotated 45° contralaterally for 30 min after the injection. Twenty-four hours later, three-dimensional fluid-attenuated inversion recovery MRI, using a 3-Tesla unit, was performed. Prevalence and extension of EH in MD patients was evaluated and correlated with age, duration and stage of the disease, frequency of attacks, time interval from the last attack, functional level scale, tinnitus, aural fullness, caloric stimulation, electrocochleography, and vestibular evoked myogenic potentials. All patients showed impaired enhancement of the inner ear of variable degree with the vestibular portion of the labyrinth more frequently involved than the cochlea. Abnormal vestibular evoked myogenic potentials, duration, and stage of the disease were significantly correlated to the number of inner ear sites involved. Modern imaging makes possible the identification of the endolymphatic hydrops in MD patients, improving diagnostic accuracy. The role of hydrops in the clinical manifestations and its correlation with most of the diagnostic parameters remain, however, not completely clear.

[Hernia](#). 2010 Oct;14(5):517-22. doi: 10.1007/s10029-010-0701-0. Epub 2010 Jul 10.

NOTES transgastric abdominal wall hernia repair in a porcine model.

[Earle DB](#), [Desilets DJ](#), [Romanelli JR](#).

Source

Department of Surgery, Baystate Medical Center, Tufts University School of Medicine, Springfield, MA 01199, USA.

Abstract

INTRODUCTION:

With approximately 1 million ventral and inguinal hernia repairs performed in the United States each year, even small rates of complications translate into large numbers of patients. Less invasive approaches that potentially lower morbidity deserve consideration, recognizing there are many technical considerations that currently limit their use. We describe a reproducible technique and lessons learned in our laboratory that answer some existing questions with regards to the use of NOTES for hernia repair.

METHODS:

A non-survival porcine model with general anesthesia was utilized in all cases. Each animal underwent transgastric peritoneal access with a percutaneous endoscopic gastrostomy (PEG) technique, and the gastrostomy was dilated with a wire-guided balloon dilatation catheter. An Esophageal Z-stent delivery device (Cook Medical, Winston-Salem, NC) was modified ex-vivo to allow us to introduce and protect a 10 x 15 cm lightweight polypropylene hernia prosthetic with pre-placed sutures. Once deployed, the sutures were pulled through the abdominal wall using a looped spinal needle technique in combination with the flexible endoscope. After the four anchoring sutures were tied, proprietary endoscopically placed tacks (Cook Medical) were placed at regular intervals between the sutures to secure the edges of the prosthetic.

RESULTS:

Hernia repairs were performed on five animals. In each case, we successfully completed prosthetic delivery and deployment into the peritoneal cavity, anchoring to the abdominal wall with full-thickness abdominal wall sutures, and endoscopically placed nitinol tacks. All prosthetics were deployed flat against the anterior abdominal wall. Operative times ranged from 65 to 120 min.

CONCLUSION:

Transgastric abdominal wall hernia repair is feasible, consistent, and reproducible. In particular, the delivery system can successfully deliver the prosthetic across the gastric wall via a transoral route. Survival animal experiments investigating outcomes related to quality of repair, microbiology, adhesions, and visceral closure need to be done. Human studies are not recommended until these issues are formally investigated.

[Eur Rev Med Pharmacol Sci](#). 2010 May;14(5):465-9.

A new technical contribution for ultrasound-guided injections of sacro-iliac joints.

[Migliore A](#), [Bizzi E](#), [Massafra U](#), [Vacca F](#), [Martin-Martin LS](#), [Granata M](#), [Tormenta S](#).

Source

UOS of Rheumatology, S. Pietro Fatebenefratelli Hospital, Rome, Italy.
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Abstract

INTRODUCTION:

Sacroiliac joint (SIJ) represents a difficult location for local therapies, as intra-articular injections may be hard to execute, especially in particular conditions such as chronic inflammatory diseases. However, in selected patients, local therapies may be considered. Some recent studies demonstrated the feasibility of ultrasound (US)-guided injection of SIJ, but still a complete explanation and definition of the technique is needed.

MATERIALS AND METHODS:

Seven patients, four males and 3 females, affected by mono or bilateral sacroiliitis entered the study. Each patient received 40 mg of acetamide triamcinolone for each SIJ, intra articular (IA) US-guided injection. The technical originality proposed in this study consists in the spinal needle insertion in the middle of the cranial long side of the linear transducer with an orientation of about 10 degrees, determining shorter needle insertion for reaching joint space and consequently probably granting lesser pain and traumatism for patients.

RESULTS:

A total of 22 injections was performed. The longer follow-up time obtained was 18 months in 3 patients. All patients reached at least a 6 month follow-up. All patients reported an amelioration in pain that lasted for at least 6 months. No systemic adverse events were

reported or observed. Complete visualization of SIJ and of needle placement was performed by US imaging, while compound proper injection was also visualized by Color-Doppler US imaging.

DISCUSSION:

Actually, sacroiliac joint intraarticular injections are often performed under fluoroscopy or Computerized Tomography guidance. Such techniques present several limitations, especially for repeated injections, such as the use of ionizing radiations, the need of a contrast agent and the direct and indirect costs connected. US guidance in IA SIJ injections may represent an easily repeatable imaging technique for needle placement and a precious tool for detecting inflammatory activity of the joint.

[J Clin Ultrasound](#). 2010 Jul;38(6):305-8. doi: 10.1002/jcu.20682.

Preoperative localization of cystic lesions in the knee using ultrasound-guided injection of indigo carmine.

[Park HJ](#), [Lee SM](#), [Choi JA](#), [Park NH](#), [Kim HS](#), [Park SI](#).

Source

Department of Radiology, Myoungji Hospital, Kwandong University College of Medicine, Koyang, Korea.

Abstract

PURPOSE:

To evaluate the feasibility and effectiveness of preoperative localization of cystic lesions in the knee using ultrasound-guided indigo carmine injection.

METHOD:

Twenty-three cysts in the knee in 23 patients (M:F = 15:8, mean age, 42 years) were localized preoperatively by ultrasound-guided indigo carmine injection. These included 12 meniscal cysts, 7 popliteal cysts, and 4 ganglion cysts. To stain the lesions, 0.2-3 mL of indigo carmine was injected into the cyst using a 22-gauge spinal needle. After localization, the patient was immediately transferred to the operating room and surgery was performed. Intraoperative findings and arthroscopic images were reviewed.

RESULT:

All 23 cysts were stained successfully. Twenty cases were confirmed during arthroscopy and 3 cases were confirmed during excisional surgery. There was no significant bleeding/hematoma or anaphylactic reaction. Four patients felt pain during aspiration before indigo carmine injection. The lesions were stained blue and could be clearly identified by the surgeon and were removed arthroscopically or by open surgery.

CONCLUSION:

Preoperative localization of cystic lesions in the knee joint region using ultrasound-guided indigo carmine injection is a feasible technique and can be easily and safely performed.

[AJNR Am J Neuroradiol](#). 2010 May;31(5):961-6. doi: 10.3174/ajnr.A1936. Epub 2009 Dec 24.

Usefulness of percutaneously injected ethylene-vinyl alcohol copolymer in conjunction with standard endovascular embolization techniques for preoperative

devascularization of hypervascular head and neck tumors: technique, initial experience, and correlation with surgical observations.

[Gemmete JJ](#), [Chaudhary N](#), [Pandey A](#), [Gandhi D](#), [Sullivan SE](#), [Marentette LJ](#), [Chepeha DB](#), [Ansari SA](#).

Source

Division of Interventional Neuroradiology, Department of Radiology, University of Michigan Health System, Ann Arbor, Michigan 48109-0030, USA. gemmete@umich.edu

Abstract

BACKGROUND AND PURPOSE:

Few reports have described the embolization of head and neck lesions by using direct percutaneous techniques. We report our preliminary experience in the direct percutaneous embolization of hypervascular head and neck tumors by using Onyx in conjunction with standard endovascular embolization techniques. We describe the technical aspects of the procedure and its efficacy in reducing intraoperative blood loss.

MATERIALS AND METHODS:

We retrospectively studied 14 patients (3 females and 11 males; mean age, 33.4 years; range, 11-56 years) with 15 hypervascular tumors of the head and neck that underwent direct percutaneous embolization with Onyx in conjunction with particulate embolization. Nine paragangliomas and 6 JNAs underwent treatment. Documented blood loss was obtained from operative reports in these 15 patients with surgical resection performed 24-48 hours after the embolization.

RESULTS:

Intratumoral penetration with progressive blood flow stasis was achieved during each injection. A mean of 3.1 needles (20-gauge, 3.5-inch spinal needle) were placed percutaneously into the lesion (range, 1-6). The mean intraoperative blood loss was 780 mL (range, <50-2200 mL). Near total angiographic devascularization was achieved in 13 of 15 tumors. There were no local complications or neurologic deficits from the percutaneous access or embolization of these hypervascular tumors.

CONCLUSIONS:

In this study, the use of percutaneous injected Onyx in conjunction with standard endovascular embolization techniques in patients with hypervascular head and neck tumors seemed to enhance the ability to devascularize these tumors before operative removal.

[Int J Oral Maxillofac Surg](#). 2010 May;39(5):493-6. doi: 10.1016/j.ijom.2009.11.002. Epub 2009 Dec 2.

Anatomical study of the pterygopalatine fossa pertinent to the maxillary nerve block at the foramen rotundum.

[Stojcev Stajčić L](#), [Gacić B](#), [Popović N](#), [Stajčić Z](#).

Source

Clinic of Oral Surgery, Faculty of Stomatology, University of Belgrade, Belgrade, Serbia.

Abstract

The anatomy of the pterygopalatine fossa pertinent to the technique of maxillary nerve block at the foramen rotundum was investigated and the ability of inexperienced surgeons to apply the required angles of the injection needle to the sagittal plane in a clinical environment. In 85 dried human skulls the volume, length, width and depth of 159 intact pterygopalatine fossae were measured. The frequency of reaching the sphenopalatine foramen using a 20 G spinal needle advanced from the frontozygomatic angle through the pterygomaxillary fissure was determined. 49 oral surgery postgraduates aligned the injection needle with angles of 60 degrees and 80 degrees to the sagittal plane of a volunteer's head. The dimensions of the pterygopalatine fossa were inconsistent; volume (0.1-1 cm³), width (1-9 mm) and depth (6-22 mm) showed the greatest variations. An enlarged sphenoidal process and a narrow pterygomaxillary fissure (<2 mm) were found in 15% and 8%, respectively. The sphenopalatine foramen was reached successfully in 75%. Postgraduates in oral surgery were highly accurate in the assessment of the 60 degrees and 80 degrees angles to the sagittal plane. A previously described technique of blocking the maxillary nerve at the foramen rotundum was adjusted and recommendations given to overcome anatomical obstacles.

[J Neurosurg Spine](#). 2009 Dec;11(6):749-57. doi: 10.3171/2009.6.SPINE08710.

Percutaneous transplantation of human umbilical cord blood-derived multipotent stem cells in a canine model of spinal cord injury.

[Lee JH](#), [Chang HS](#), [Kang EH](#), [Chung DJ](#), [Choi CB](#), [Lee JH](#), [Hwang SH](#), [Han H](#), [Kim HY](#).

Source

Department of Veterinary Surgery, Konkuk University, Seoul, Republic of Korea.

Abstract

OBJECT:

The authors describe a method for percutaneous transplantation of human umbilical cord blood (hUCB)-derived multipotent stem cells (MSCs) under fluoroscopic guidance. The investigators then tested whether percutaneous transplantation of hUCB-derived MSCs improved neurological functional recovery after acute spinal cord injury (SCI).

METHODS:

The authors induced SCI in 10 dogs by percutaneous balloon compression. The 10 injured dogs were assigned randomly to the following groups (2 dogs each): Group 1, evaluated 2 weeks after sham transplantation; Group 2, evaluated 2 weeks after transplantation; Group 3, evaluated 4 weeks after sham transplantation; Group 4, evaluated 4 weeks after transplantation; and Group 5, evaluated 4 weeks after multispot transplantations. The dogs with sham transplantation (Groups 1 and 3) received the same volume of saline, as a control. A spinal needle was advanced into the spinal canal, and the investigators confirmed that the end of the spinal needle was located in the ventral part of spinal cord parenchyma by using contrast medium under fluoroscopic guidance. The hUCB-derived MSCs were transplanted into the cranial end of the injured segment in 6 injured dogs at 7 days after SCI.

RESULTS:

Two dogs in Group 2 showed no improvement until 2 weeks after transplantation. Three of 4 dogs (Groups 4 and 5) that received cellular transplants exhibited gradual improvement in hindlimb locomotion from 3 weeks after cell transplantation. The CM-Dil-labeled hUCB-derived MSCs were observed in the spinal cord lesions at 4 weeks posttransplantation and

exerted a significant beneficial effect by reducing cyst and injury size. The transplanted cells were positive for NeuN, glial fibrillary acidic protein, and von Willebrand factor.

CONCLUSIONS:

The percutaneous transplantation technique described here can be easily performed, and it differs from previous techniques by avoiding surgical exposure and allowing cells to be more precisely transplanted into the spinal cord. This technique has many potential applications in the treatment of human SCI by cell transplantation. The results also suggest that transplantation of hUCB-derived MSCs may have therapeutic effects that decrease cavitation for acute SCI.

[Arch Orthop Trauma Surg.](#) 2010 Mar;130(3):407-11. doi: 10.1007/s00402-009-0996-4. Epub 2009 Nov 10.

Mattress suture-bridge technique for bursal-side partial-thickness rotator cuff tears.

[Kim KC](#), [Rhee KJ](#), [Shin HD](#), [Kim DK](#).

Source

Department of Orthopaedic Surgery, Chungnam National University School of Medicine, Daejeon, South Korea. kckim@cnuh.co.kr

Abstract

The standard procedure used to repair partial-thickness tears involves initial progression of the lesion to a full-thickness tear prior to tendon repair. However, the option for a bursal-side partial-thickness rotator cuff tear includes the preservation of as much of the remaining intact fibers as possible. Instead of inserting suture anchors in the medial row, as in the conventional suture-bridge technique, two mattress sutures are inserted into the rotator cuff. Full-thickness access is achieved using a percutaneous spinal needle and medial mattress sutures to preserve the articular bone attachment of the remnant fibers and to compress the repaired tendon on the footprint. Our method can help preserve the remnant rotator cuff tendon without tissue damage and can restore the normal rotator cuff footprint.

[Skeletal Radiol.](#) 2010 Jun;39(6):575-9. doi: 10.1007/s00256-009-0793-8. Epub 2009 Sep 26.

Efficacy of ultrasonography-guided shoulder MR arthrography using a posterior approach.

[Gokalp G](#), [Dusak A](#), [Yazici Z](#).

Source

Department of Radiology, Uludag University Medical Faculty, Görükle Kampusu, 16059 Nilüfer, Bursa, Turkey. drgokhangokalp@yahoo.com

Abstract

AIM:

Shoulder MR arthrography has an important role in the assessment of rotator cuff lesions, labral tears, glenohumeral ligaments, rotator interval lesions, and postoperative shoulder status. Injection in direct MR arthrography can be performed with palpation, fluoroscopy, ultrasonography (US), or MRI. Recently, the posterior approach is the preferred method due

to the presence of fewer stabilizers, absence of important articular structures and less extravasation, has been advocated. Our aim was to assess the efficacy of US-guided MR arthrography via a posterior approach on the glenohumeral joint.

MATERIALS AND METHODS:

Thirty MR arthrographies were performed on 29 patients. Ultrasonography (Xario, Toshiba) examinations were conducted by a wide-band 5-12 Mhz linear array transducer set to muscle-skeleton. Diluted contrast medium (1 ml gadolinium chelate and 100 ml saline, approximately 15 ml) was delivered into the glenohumeral joint space from between the humeral head and posterior labrum with a 20-gauge spinal needle. MRI examination was conducted by a 1.5 T scanner. Fat-saturated T1-weighted spin echo was applied on coronal, axial, and sagittal planes within the first 30 min after contrast material injection.

RESULTS:

One (3.3%) arthrography was not successful due to technical reasons associated with obesity. Contrast extravasation around the infraspinatus and teres minor muscles was depicted in twelve examinations. One (3.3%) patient developed vasovagal collapse.

CONCLUSION:

Ultrasonography-guided posterior approach is an easy, reliable, fast, and comfortable method in experienced hands. It may be an alternative for fluoroscopy-guided shoulder MR arthrography.

[Iowa Orthop J. 2009;29:55-9.](#)

Comparison of two different anesthesia techniques for tourniquet pain with the use of forearm tourniquet.

[Inal S](#), [Er M](#), [Ozsoy M](#), [Cavusoglu A](#), [Dincel V](#), [Sakaogullari A](#).

Source

Department of Orthopaedic Surgery, T.C.S.B. Ankara Occupational Diseases Hospital, Keçiören, Ankara, Turkey. drsermetinal@yahoo.com

Abstract

PURPOSE:

The purpose of this prospective, randomized study was to compare the effectiveness of two different anesthesia techniques for tourniquet pain in minor surgeries of the hand with the use of the forearm tourniquet.

METHODS:

In group 1, the area under the tourniquet was anesthetized circumferentially using a cream composed of 5% lidocaine and 5% prilocaine (Emla Astra). In group 2, the area under the tourniquet was anesthetized with a ring-type infiltration of the skin and subcutaneous tissues using 50% diluted Citanest solution using 22 G x 3 1/2" size spinal needle (Sujia) with three injections.

RESULTS:

There were no statistically significant differences between the means of the two groups with respect to both tests (p value = 0.18 [t-test], p = 0.951 [Mann-Whitney test]). Tourniquet related anesthesia technique discomfort was higher in group 2 (p = 0.001).

CONCLUSIONS:

The tourniquet placed at the distal forearm is an effective, safe, and useful technique for hand surgery. Anesthesia using Emla cream is equally effective and less disturbing than using the injection technique (subcutaneous ring anesthesia).

[Singapore Med J.](#) 2009 Aug;50(8):845.

Inadvertent rent in the intravenous cannula sheath and its exchange using a spinal needle.

[Garg R.](#)

[Ann Thorac Surg.](#) 2009 Jul;88(1):258-61. doi: 10.1016/j.athoracsur.2009.02.046.

An experimental study of type I endoleak repair with a suturing device.

[Ohtake H](#), [Tomita S](#), [Yamaguchi S](#), [Yoshida S](#), [Kimura K](#), [Sanada J](#), [Matsui Q](#), [Watanabe G](#).

Source

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Abstract

PURPOSE:

An experimental study was done to investigate repair of type I endoleaks in thoracic aortic aneurysms using the T-Fix suturing device (Smith & Nephew Co, Ltd, London, United Kingdom).

DESCRIPTION:

A saccular descending aortic aneurysm was made in 5 pigs experimentally. A stent graft was deployed to produce a proximal type I endoleak. Under fluoroscopy, the aorta was punctured with the spinal needle with the T-Fix plastic bar, and the plastic bar was deployed with a push rod. A sufficient number of T-Fix sutures were used until angiography revealed that the type I endoleak had disappeared.

EVALUATION:

No hemodynamic events occurred during the procedure. An average of 2.5 +/- 0.6 T-Fix sutures were required to eliminate the endoleak. The experimental T-Fix repair was performed without any complications. A new method of repairing type I endoleaks for thoracic aortic aneurysms was successfully performed using the T-Fix system.

CONCLUSIONS:

Although the T-Fix repair currently has some anatomic and clinical limitations, improvement of the device should lead to the increased use of this repair.

[Pain Pract.](#) 2009 Jul-Aug;9(4):317-21. doi: 10.1111/j.1533-2500.2009.00291.x. Epub 2009

May 29.

Paracoccygeal corkscrew approach to ganglion impar injections for tailbone pain.

[Foye PM](#), [Patel SI](#).

Source

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doctor@tailbone.info

Abstract

A new technique for performing nerve blocks of the ganglion impar (ganglion Walther) is presented. These injections have been reported to relieve coccydynia (tailbone pain), as well as other malignant and nonmalignant pelvic pain syndromes. A variety of techniques have been previously described for blocking this sympathetic nerve ganglion, which is located in the retrorectal space just anterior to the upper coccygeal segments. Prior techniques have included approaches through the anococcygeal ligament, through the sacrococcygeal joint, and through intracoccygeal joint spaces. This article presents a new, paracoccygeal approach whereby the needle is inserted alongside the coccyx and the needle is guided through three discrete steps with a rotating or corkscrew trajectory. Compared with some of the previously published techniques, this paracoccygeal corkscrew approach has multiple potential benefits, including ease of fluoroscopic guidance using the lateral view, ability to easily use a stylet for the spinal needle, and use of a shorter, thinner needle. While no single technique works best for all patients and each technique has potential advantages and disadvantages, this new technique adds to the available options.

[Int J Urol](#). 2009 Apr;16(4):420-3. doi: 10.1111/j.1442-2042.2009.02269.x.

Simple and effective local anesthesia for transperineal extended prostate biopsy: application to three-dimensional 26-core biopsy.

[Kubo Y](#), [Kawakami S](#), [Numao N](#), [Takazawa R](#), [Fujii Y](#), [Masuda H](#), [Tsuji T](#), [Kihara K](#).

Source

Department of Urology, Tokyo Medical and Dental University, Graduate School, Tokyo, Japan.

Abstract

We developed a local anesthetic procedure for three-dimensional 26-core prostate biopsy (3D26PBx), a combination of transperineal 14-core biopsy (TP14PBx) and transrectal 12-core biopsy (TR12PBx). At first, a periapical triangle, confined by the levator ani, the rhabdosphincter and the external anal sphincter muscle, was made visible by transrectal ultrasound. After administration of 1 mL of 1%-lidocaine into the midline perineal skin 1.5 cm above the anus, we inserted a spinal needle toward the periapical triangle for injection of 1.5-2.0 mL of 1%-lidocaine and performed the TP14PBx. After administration of the periprostatic nerve block with 10 mL of 1%-lidocaine, we performed the TR12PBx. The efficacy of the procedure was evaluated prospectively in 45 consecutive men undergoing the 3D26PBx. The 3D26PBx was completed with just local anesthesia in all patients. The pain levels, assessed by an 11-point visual analog scale, were not different between the TP14PBx and the TR12PBx.

[J Endourol](#). 2009 May;23(5):857-60. doi: 10.1089/end.2008.0634.

Efficacy of peritubal local anesthetic infiltration in alleviating postoperative pain in percutaneous nephrolithotomy.

[Jonnavithula N](#), [Pisapati MV](#), [Durga P](#), [Krishnamurthy V](#), [Chilumu R](#), [Reddy B](#).

Source

Department of Anesthesiology and Critical Care, Nizam's Institute of Medical Sciences, Hyderabad, India.

Abstract

BACKGROUND AND PURPOSE:

Percutaneous nephrolithotomy (PCNL) is a safe and effective endourologic procedure in patients with renal calculi. It is less morbid than open surgery. However, the patient complains of pain around the nephrostomy tube and demands for good postoperative analgesia. Skin infiltration with bupivacaine around the nephrostomy tube is not effective, so we hypothesize that peritubal infiltration of bupivacaine from renal capsule to the skin along the nephrostomy tract may alleviate postoperative pain.

PATIENTS AND METHODS:

A randomized controlled study was designed in 40 American Society of Anesthesiologists (ASA) grade I patients to assess the impact of peritubal bupivacaine infiltration with 23-gauge spinal needle along the nephrostomy tract after PCNL under fluoroscopic guidance. Patients were randomized to receive 20 mL of 0.25% bupivacaine in block group (n = 20) or no infiltration in control group (n = 20) at the conclusion of the procedure. Postoperative pain score and analgesic requirement for the first 24 hours were assessed by visual and dynamic visual analog scales second hourly. Rescue analgesia with injection tramadol Hcl 50-100 mg was given intravenously to a maximum total dose of 400 mg when pain score exceeded 4.

RESULTS:

Pain scores and analgesic requirement for the first 24 hours postoperatively were significantly lesser in the block group than in the control group of patients at all points of time and were statistically significant ($p < 0.005$).

CONCLUSION:

In this study a significant difference in the pain scores and analgesic requirement was noted in the two groups of patients. Peritubal infiltration of 0.25% bupivacaine solution is efficient in alleviating postoperative pain after PCNL.

[Eur Radiol](#). 2009 Sep;19(9):2238-43. doi: 10.1007/s00330-009-1404-8. Epub 2009 Apr 22.

CT-guided radiofrequency ablation of spinal osteoid osteomas with concomitant perineural and epidural irrigation for neuroprotection.

[Klass D](#), [Marshall T](#), [Toms A](#).

Source

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Abstract

Here we report our experience of a neuroprotective adaptation of the technique of CT-guided radiofrequency (RF) ablation of spinal osteoid osteomas. Over 9 years seven patients underwent eight CT-guided RF treatments for osteoid osteoma. CT-guided RF ablation was performed with general anaesthesia. The lesion was heated to 90 degrees C for 2 min for two cycles by using a Cosman SMK TC-10 RF electrode. This was preceded by a bolus of room temperature sterile water (10 ml) injected through a 26G curved spinal needle into the exit foramen and adjacent epidural space for neuroprotection. The age of the patient, sex, lesion location, biopsy results and complications were recorded. All the biopsies (n = 7) demonstrated histological features of osteoid osteoma. All the procedures were technically successful. Clinical success was assessed up to 3 years post procedure. There was an 85% clinical success rate (6 of the 7 patients), with recurrence of a lesion at 6 months, necessitating a repeat procedure (successful). CT-guided percutaneous RF ablation of spinal osteoid osteoma preceded by bolus of sterile water, injected through a spinal needle into the exit foramen and adjacent epidural space for neuroprotection, is a safe and effective procedure.

[J Neurosurg.](#) 2009 Dec;111(6):1191-2. doi: 10.3171/2009.3.JNS081651.

Emergency transorbital ventricular puncture: refinement of external landmarks.

[Tubbs RS](#), [Loukas M](#), [Shoja MM](#), [Cohen-Gadol AA](#).

Source

Section of Pediatric Neurosurgery, Children's Hospital, 1600 7th Avenue South ACC 400, Birmingham, Alabama 35233, USA. rstubbs@uab.edu

Abstract

OBJECT:

Emergency access to the ventricular system is sometimes necessary for the treatment of raised intracranial pressure with ensuing herniation. One procedure described in the literature is a transorbital approach performed using a spinal needle. Because past publications have been case reports with minimal definition of external landmarks, the present study was performed.

METHODS:

Five adult cadavers (10 sides) underwent transorbital puncture of the lateral ventricles. This approach was performed following an axial section through the cranium that exposed the lateral ventricular system. Landmarks for the ideal placement of catheters into the ventricular system were then evaluated.

RESULTS:

The authors found that the lateral ventricular system was consistently entered just superior to the level of the foramen of Monro by puncturing the roof of the orbit just medial to a midpupillary line, with the trajectory of the perforation aimed 45 degrees from a horizontal line and 15-20 degrees medial to a vertical line.

CONCLUSIONS:

Although it is uncommon, transorbital ventriculostomy may be used in emergency cases of raised intracranial pressure. Such refined landmarks as described in the present study may be of use to the neurosurgeon.

[Am J Orthop \(Belle Mead NJ\)](#). 2009 Feb;38(2):94-6.

Arthroscopic aspiration and labral repair for treatment of spinoglenoid notch cysts.

[Tashjian RZ](#), [Burks RT](#).

Source

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Abstract

Spinoglenoid notch cysts are a relatively uncommon cause of shoulder pain and weakness, are often associated with labral tears, and commonly result in compression of the suprascapular nerve. Open and arthroscopic treatments have been described. In an attempt to limit potential suprascapular nerve injury during arthroscopic excision, we have used a technique of arthroscopic cyst aspiration followed by labral repair. Routine glenohumeral arthroscopy is performed in preparation for superior labral repair. A 17-gauge spinal needle is then inserted 1 cm lateral to the posterior portal directed just lateral to the labrum in the region of the cyst (usually posterior-superior quadrant of glenoid). The cyst material is aspirated (commonly 5-15 mL), and the labral tear is repaired without violating the glenohumeral capsule. For all 4 patients described in this report, magnetic resonance imaging showed complete cyst resolution at a minimum of 6 months after surgery. Cyst aspiration followed by labral repair limits the potential for nerve injury while increasing the likelihood of complete cyst resolution during arthroscopic treatment of spinoglenoid notch cysts.

[Knee Surg Sports Traumatol Arthrosc](#). 2009 Nov;17(11):1332-5. doi: 10.1007/s00167-009-0785-1. Epub 2009 Mar 31.

A novel technique for arthroscopic reduction and repair of a bucket-handle meniscal tear.

[Yoon JR](#), [Muzaffar N](#), [Kang JW](#), [Lim HC](#), [Bae JH](#), [Nha KW](#).

Source

Department of Orthopedic Surgery, Seoul Veterans Hospital, 6-2, Dunchon-dong, Kangdong-Gu, Seoul 134-060, Korea. zenyjr@yahoo.co.kr

Abstract

We present a new technique designed for the reduction and repair of bucket-handle meniscal tears. After assessing the rotation of the displaced tear fragment of the meniscus, the centrally displaced portion of the tear is vertically pierced with a suture hook enabling passage of a No. 0 PDS suture, both limbs of which are retrieved out of the joint. Next, using a spinal needle and a shuttle relay system, both ends of the No. 0 PDS on the femoral and tibial surfaces of the meniscus are extricated outside the joint capsule. In the final step, reduction of the displaced fragment is achieved by pulling on the PDS suture and the same suture is used for repair too, after which additional sutures are applied. This is a useful technique, which affords the benefit of rotational reduction of a bucket-handle meniscal tear using a single suture, as well as improved maneuverability for freshening of the tear margins prior to repair and additional suturing, and finally for repair as a full-thickness vertical suture.

[J Clin Rheumatol](#). 2009 Apr;15(3):103-5. doi: 10.1097/RHU.0b013e318190fa20.

An inexpensive and accurate method for hip injections without the use of imaging.

[Ziv YB](#), [Kardosh R](#), [Debi R](#), [Backstein D](#), [Safir O](#), [Kosashvili Y](#).

Source

Department of Orthopaedic Surgery, Assaf Harofeh Hospital, Zerrifin, Israel.

Abstract

BACKGROUND:

Intraarticular injections of the hip have traditionally required sonographic or fluoroscopic guidance assistance. Previous studies report high failure rates with injections based solely on anatomic landmarks.

OBJECTIVES:

To examine the accuracy of a lateral injection technique in osteoarthritic patients without using image assistance.

METHODS:

This study was conducted in the operating room in 40 consecutive patients about to undergo total hip arthroplasty. Before sedation, each patient was positioned in a lateral decubitus position. Under sterile conditions, methylene blue dye was injected through an 18G spinal needle that was inserted 1 cm proximal to the midline of the greater trochanter, and directed toward the superolateral aspect of the femoral neck, according to preoperative hip x-rays. Accuracy was assessed intraoperatively by examining the joint and surrounding tissues for the presence of dye.

RESULTS:

Injections were successful in 6 of the first 10 (60%) patients and in 25 of the remaining 30 (83.3%) patients. Overall, injections were successful in 31 of 40 (77.5%) patients with disseminated dye solely in the intracapsular space. In all 9 unsuccessful injections, the dye was located distal to the joint, along with the more lateral aspect of the femoral neck.

CONCLUSION:

Accuracy of injections, to the hip joint, based on anatomic landmarks and preoperative x-rays is similar to those documented for knee injections in the literature. When unsuccessful, the injected material was not found close to neurovascular structures. This technique has an acceptable learning curve and can be used safely in a standard office setting.

[Arthroscopy](#). 2009 Mar;25(3):325-8. doi: 10.1016/j.arthro.2008.06.014. Epub 2008 Aug 28.

Arthroscopic decompression of a bony suprascapular foramen.

[Agrawal V](#).

Source

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Abstract

Arthroscopic decompression of the suprascapular nerve by transection of the transverse scapular ligament has only recently been described. Arthroscopic decompression of a bony

suprascapular notch foramen has not been previously reported. This article presents a case report and outlines an arthroscopic technique to safely decompress a bony suprascapular notch. In the subacromial space, a lateral portal is used for viewing and a posterior portal for instrumentation. The medial wall of the subacromial bursa located behind the acromioclavicular joint is debrided with the shaver facing laterally and superiorly. The posterior acromioclavicular artery is routinely coagulated. A superomedial portal is now established using spinal needle localization. A smooth 5.5-mm cannula is placed in this portal and the coracoclavicular ligaments (trapezoid and conoid) are followed to the coracoid. The smooth cannula serves nicely to sweep and retract the suprascapular artery and associated fibrofatty tissue from the field of view while allowing instrumentation and visualization of the suprascapular notch. The course of the suprascapular nerve and morphology of the notch is confirmed. A Kerrison punch rongeur, routinely used in spine surgery, is introduced through the superomedial portal and a notchplasty is performed safely, allowing decompression of the suprascapular nerve.

[Arch Orthop Trauma Surg.](#) 2010 Mar;130(3):297-300. doi: 10.1007/s00402-008-0811-7. Epub 2009 Jan 13.

Accuracy of anterior glenohumeral injections: a cadaver study.

[Esenyel CZ](#), [Ozturk K](#), [Demirhan M](#), [Sonmez M](#), [Kahraman S](#), [Esenyel M](#), [Ozbaydar MU](#), [Senel B](#).

Source

Department of Orthopaedics and Traumatology, Vakif Gureba Training Hospital, Capa, Istanbul, Turkey. esenyel@yahoo.com

Abstract

PURPOSE:

Intra-articular glenohumeral injections have an important role for therapeutic benefit and diagnostic information. Therefore, it is very important that the injected material should reach its desired target. This study assessed the accuracy of an anterior intra-articular injection in fresh cadavers.

METHODS:

A total of 50 shoulders of 25 fresh cadavers were included in the study. Anterior placement of a spinal needle using a location just 1 cm lateral to the coracoid, without radiographic assistance were performed. After the needle was placed and estimated to be intra-articular 1 cc of acrylic dye was injected into the joint to determine accuracy of position.

RESULTS:

Ninety-six percent of injections were accurately administered into the glenohumeral joint and 4% in the surrounding soft tissues and capsule.

CONCLUSION:

Based on our cadaveric study, an unassisted anterior injection to the glenohumeral joint could be accurately placed.

[BMC Musculoskelet Disord.](#) 2008 Oct 15;9:140. doi: 10.1186/1471-2474-9-140.

Thoracic costotransverse joint pain patterns: a study in normal volunteers.

[Young BA](#), [Gill HE](#), [Wainner RS](#), [Flynn TW](#).

Source

Department of Physical Therapy, Sheppard Air Force Base, Texas, USA.
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Abstract

BACKGROUND:

Pain referral patterns of asymptomatic costotransverse joints have not been established. The objective of this study was to determine the pain referral patterns of asymptomatic costotransverse joints via provocative intra-articular injection.

METHODS:

Eight asymptomatic male volunteers received a combined total of 21 intra-articular costotransverse joint injections. Fluoroscopic imaging was used to identify and isolate each costotransverse joint and guide placement of a 25 gauge, 2.5 inch spinal needle into the costotransverse joint. Following contrast medium injection, the quality, intensity, and distribution of the resultant pain produced were recorded.

RESULTS:

Of the 21 costotransverse joint injections, 16 (76%) were classified as being intra-articular via arthrograms taken at the time of injection, and 14 of these injections produced a pain sensation distinctly different from that of needle placement. Average pain produced was 3.3/10 on a 0-10 verbal pain scale. Pain was described generally as a deep, dull ache, and pressure sensation. Pain patterns were located superficial to the injected joint, with only the right T2 injections showing referred pain 2 segments cranially and caudally. No chest wall, upper extremity or pseudovisceral pains were reported.

CONCLUSION:

This study provides preliminary data of the pain referral patterns of costotransverse joints. Further research is needed to compare these findings with those elicited from symptomatic subjects.

[Radiologia](#). 2008 Jul-Aug;50(4):297-302.

[MR-arthrography of the shoulder. Description and evaluation of the technique using a US-guided pediatric spinal needle].

[Article in Spanish]

[Fernández GC](#), [Berástegui-Imaz M](#), [Pérez-Arroyuelos I](#), [Prada González R](#), [Velasco Casares M](#), [Tardáquila FM](#).

Source

Servicio de Radiología, Hospital POVISA, Vigo, Pontevedra, España. gabrife@teleline.es

Abstract

OBJECTIVE:

To describe the technique of US-guided shoulder arthrography using a pediatric needle (modified Valls- Melloni technique) and to assess its efficacy.

MATERIAL AND METHODS:

Descriptive study of articular puncture for 48 magnetic resonance imaging arthrographs of the shoulder in 48 consecutive patients. The puncture was performed by a radiologist without prior experience in the technique. We used an anterior approach to the shoulder, guiding the puncture using US according to the Valls-Melloni technique; however, we used a pediatric spinal needle (Yale spinal; 22G: 0.7 x 40 mm). The efficacy of the technique was evaluated using the following variables: time employed, number of attempts, extravasation of contrast outside the joint, pain reported by the patient (on a scale from 0 to 10), and immediate or late complications of the technique.

RESULTS:

The time required for the procedure was 15.2±2.6 min (mean±standard deviation). A single puncture sufficed in 45 patients (94%); two attempts were necessary in two patients (4%) and three in one patient (2%). Contrast extravasation outside the joint occurred only in two patients (4%). The mean pain reported was 3.6 points (confidence interval: 3.1-4). Three patients (6%) had a vasovagal reaction. No late complications were observed.

CONCLUSION:

US-guided shoulder arthrography using a pediatric spinal needle is fast, simple, and safe; it can be performed by any radiologist, even without prior experience in the technique.

[Arthroscopy](#). 2008 Sep;24(9):992-6. doi: 10.1016/j.arthro.2008.04.070. Epub 2008 Jun 16.

Distances to the subacromial bursa from 3 different injection sites as measured arthroscopically.

[Sardelli M](#), [Burks RT](#).

Source

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Abstract**PURPOSE:**

The purpose of this study was to assess the distance for a standard needle to reach the subacromial bursa through 3 commonly used approaches.

METHODS:

Thirty patients without associated rotator cuff tears underwent arthroscopic evaluation of the shoulder. The bursa was entered without shaving or altering of the bursa. By use of standard arthroscopic portals, a spinal needle was inserted from an anterior, lateral, and posterior position and measured to define the distance to the subacromial bursa from the skin.

RESULTS:

The mean distance with anterior needle placement was 2.9 ± 0.6 cm. The mean distance with lateral needle placement was 2.9 ± 0.7 cm. The mean distance with posterior needle placement was 5.2 ± 1.1 cm. The mean body mass index for the group of patients was 27.5. The minimum was 18.7, and the maximum was 42.8.

CONCLUSIONS:

The distance to the subacromial bursa from the anterior and lateral approaches appears to be consistent and within reach of a standard 22- or 25-gauge needle. The distance to the subacromial bursa from a posterior approach appears to be almost double that of the anterior and lateral approaches and may not be reachable by standard 22- and 25-gauge needles in

all patients. There appears to be no correlation between distances to the subacromial bursa from the anterior, lateral, or posterior approaches and the patient's body mass index.

CLINICAL RELEVANCE:

Given the relative distances measured to the subacromial bursa from the anterior, lateral, and posterior positions, clinicians may choose a longer needle to improve the accuracy of placement when approaching the subacromial bursa from a posterior position. Use of a standard-length needle will provide reasonable accuracy from the anterior and lateral positions.

[Acta Otolaryngol.](#) 2009 Jul;129(7):760-7. doi: 10.1080/00016480802369302.

Efficacy of spinal needle aspiration for epiglottic abscess in 90 patients with acute epiglottitis.

[Kim SG](#), [Lee JH](#), [Park DJ](#), [Hong JW](#), [Kim TH](#), [Kim MG](#), [Shim JS](#), [Yeo SG](#).

Source

Department of Otorhinolaryngology-Head and Neck Surgery, Masan Samsung Medical Center, Sungkyunkwan University School of Medicine, Masan.

Abstract

CONCLUSION:

Patients with epiglottic abscesses showed more severe symptoms than those with acute epiglottitis and were at increased risk of airway compromise. All 11 patients with epiglottic abscesses underwent spinal needle aspiration; all were cured without severe complications. These findings indicate that spinal needle aspiration is both safe and effective in patients with epiglottic abscesses.

OBJECTIVES:

Acute epiglottitis is a disease that may become serious or even fatal because of sudden upper airway obstruction. An epiglottic abscess may result from a coalescent epiglottic infection due to acute epiglottitis or secondary infection of an epiglottic mucocele. There have been few reports comparing acute epiglottitis with epiglottic abscess. We therefore assessed the clinical characteristics of each condition, as well as the efficacy of spinal needle aspiration and drainage of epiglottic abscesses.

PATIENTS AND METHODS:

We retrospectively reviewed the records of 90 hospitalized patients diagnosed with acute epiglottitis and epiglottic abscess by flexible nasopharyngolaryngoscopy between March 2006 and February 2008. All patients were treated with medication; in addition, those with epiglottic abscess underwent spinal needle aspiration.

RESULTS:

Of 90 patients, 79 had acute epiglottitis and 11 had epiglottic abscesses. Acute epiglottitis was most common in May (16.5%) and epiglottic abscesses were most common in June (27.3%). The most common symptoms were sore throat (91.1%), dysphagia (38.9%), voice change (33.3%), and dyspnea (16.7%). All patients were treated with antibiotics and steroids. The mean length of hospitalization was 5 days. No patient required a tracheostomy or orotracheal intubation.

[J Laparoendosc Adv Surg Tech A.](#) 2008 Aug;18(4):603-5. doi: 10.1089/lap.2007.0145.

Laparoscopic treatment of a huge cystic lymphangioma: partial aspiration technique with a spinal needle.

[Ryu WS](#), [Kwak JM](#), [Seo UH](#), [Kim SH](#), [Park SS](#), [Kim CS](#), [Lee CH](#), [Mok YJ](#).

Source

Department of Surgery, Korea University College of Medicine, Seoul, Korea.

Abstract

A cystic lymphangioma is a rare intra-abdominal lesion. Treatment is a complete excision of the cyst because of complications and a rare chance of malignancy. In this paper we report on 2 patients with a huge cystic lymphangioma who were treated by laparoscopic surgery successfully. Each of the cysts were 13 and 11 cm in diameter, were diagnosed by ultrasonography and computed tomography scan. After partial aspiration of the cysts, using a spinal needle, we were prone to grasp the cysts without spillage. Traction and dissection were easy without spillage or injury of the mesenteric vessels. The laparoscopic approach can be successfully and safely performed by an experienced surgeon in keeping with oncologic principles

[J Med Assoc Thai](#). 2008 Jun;91(6):813-7.

Transabdominal chorionic villus sampling: experience at Maharaj Nakorn Chiang Mai Hospital.

[Sirichotiyakul S](#), [Piyamongkol W](#), [Tongprasert F](#), [Srisupandit K](#), [Luewan S](#).

Source

Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand. ssiricho@mail.med.cmu.ac.th

Abstract

OBJECTIVE:

To describe the experience of transabdominal chorionic villus sampling (CVS) at Maharaj Nakorn Chiang Mai Hospital.

MATERIAL AND METHOD:

Between January 2004 and July 2006, 185 pregnant women chose to have CVS for prenatal diagnosis after counseling. Transabdominal CVS under ultrasound guidance was performed in all cases under local anesthesia using spinal needle 20-gauge with back and forth movement technique. The sample was immediately examined under a microscope to determine if the villi were obtained and to remove the decidua (maternal cells) from the villi.

RESULTS:

The mean gestational age was 12.25 +/- 1.05 weeks (range 10-20 weeks). The procedure was successful in all cases, 168 cases (90.9%) with one attempt. The indications for prenatal diagnosis included fetal risk for chromosomal abnormalities (110 cases; 59.46%), severe thalassemia syndrome (57 cases; 30.81%), both of them (17 cases; 9.19%) and for HLA typing in one case. The results could not be obtained in 11 cases (5.95%) due to laboratory failure. In the present study, abnormal chromosomes were detected in chorionic villi from 12 fetuses, including 45,X (3), trisomy 18 (3), trisomy 21 (2), trisomy 7 (1) and mosaicism (3). Additionally, 18 fetuses with severe thalassemia syndrome were identified; five homozygous beta-thalassemia, 11 beta-thalassemia/Hb E disease, and two homozygous alpha-thalassemia (Hb Bart's). The complications found in the present study included one case

(0.54%) of fetal loss following the procedure and one case (0.54%) of vaginal bleeding. No case with limb reduction defect, infection, or rupture of membranes following the procedure was seen.

CONCLUSIONS:

Transabdominal CVS is a rather safe and reliable prenatal diagnostic technique. The fetal loss rate following the procedure in the present study was 0.54%. However operator' experience and skill in ultrasound-directed needle guidance procedure are essential.

[Pain Physician](#). 2008 Jul-Aug;11(4):543-7.

Ultrasound-guided sacroiliac joint injection technique.

[Harmon D](#), [O'Sullivan M](#).

Source

Department of Anesthesia and Pain Medicine, Mid-Western Regional Hospital, Dooradoyle, Limerick, Ireland. dominic.harmon@hse.ie

Abstract

We describe a case report and technique for using a portable ultrasound scanner and a curvilinear transducer (4-5MHz) (SonoSite Micromaxx SonoSite, Inc. 21919 30th Drive SE Bothwell W. A.) to guide sacroiliac joint (SIJ) injection. A 42-year-old male presented with chronic lower back pain centered on his left SIJ. His pain averaged 7 out of 10 (numerical rating scale). For the ultrasound-guided SIJ injection the patient was placed in the prone position. The ultrasound transducer was oriented in a transverse orientation at the level of the sacral hiatus. Here the sacral cornuae were identified. Moving the transducer laterally from here, the lateral edge of the sacrum was identified. This bony edge was followed in a cephalad direction with the transducer maintained in a transverse orientation. A second bony contour, the ileum, was identified. The cleft between both bony contours represented the sacroiliac joint. This was found at 4.5 cm depth. Real-time imaging was used to direct a 22G spinal needle into the SIJ, where solution was injected under direct vision. The patient's pain intensity decreased to a 2 out of 10 (numerical rating scale). Function improved and the patient was able to return to work. These improvements were maintained at 16 weeks. Ultrasound guidance does not expose patients and personnel to radiation and is readily accessible. Ultrasound-guided SIJ injections may have particular applications in the management of chronic lower back pain in certain clinical scenarios (e.g. pregnancy). Future studies to demonstrate efficacy and reproducibility are needed.

[Pain Physician](#). 2008 May-Jun;11(3):327-31.

Confirmation of needle placement within the piriformis muscle of a cadaveric specimen using anatomic landmarks and fluoroscopic guidance.

[Gonzalez P](#), [Pepper M](#), [Sullivan W](#), [Akuthota V](#).

Source

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Abstract

Of patients presenting to pain clinics, complaints are of low back or buttock pain with or without radicular leg symptoms is one of the most common. Piriformis syndrome may be a contributor in up to 8% of these patients. The mainstay of treatment is conservative management with physical therapy, anti-inflammatory medications, muscle relaxants, and correction of biomechanical abnormalities. However, in recalcitrant cases, a piriformis injection of anesthetic and/or corticosteroids may be considered. Because of its small size, proximity to neurovascular structures, and deep location, the piriformis muscle is often injected with the use of computed tomography (CT), magnetic resonance imaging (MRI), ultrasound (US), fluoroscopy, electrical stimulators, or electromyography (EMG). Numerous techniques have been proposed using one or a combination of the above modalities. However, application of these techniques is limited by unavailability of CT, MRI, and EMG equipment as well as a paucity of trained physicians in US-guided procedures in many pain treatment centers throughout the United States. Fluoroscopy, however, is more widely available in this setting. This study utilized a cadaveric specimen to confirm proper needle placement for piriformis or peri-sciatic injection utilizing the previously documented landmarks for fluoroscopic guidance as described by Betts. An anteroposterior of the pelvis with inclusion of the acetabular region of the hip and the inferior aspect of the sacroiliac joint was obtained. The most superior-lateral aspect of the acetabulum and the inferior aspect of the sacroiliac joint were identified. A marker was placed one-third of the distance from the acetabular location to the inferior sacroiliac joint, indicating the target location. A 22-gauge, 3.5-inch spinal needle was directed through the gluteal muscles to the target location using intermittent fluoroscopic guidance. The posterior ilium was contacted and the needle was withdrawn 1 -2 mm. This approach found the needle within the piriformis muscle belly 2 -3 cm lateral to sciatic nerve. The present study was the first study, to our knowledge, that has confirmed the intramuscular position of the needle within the piriformis muscle of a cadaveric specimen using these anatomic landmarks and fluoroscopic guidance.

[Eur J Anaesthesiol Suppl.](#) 2008;42:192-5. doi: 10.1017/S0265021508003517.

Intracranial pressure monitoring.

[Stefini R](#), [Rasulo FA](#).

Source

University of Brescia, Spedali Civili, Department of Neurosurgery, Brescia, Italy.

Abstract

Recent studies have demonstrated that bedside cranial burr hole and insertion of intraparenchymal catheters for intracranial pressure monitoring performed by intensive care physicians is a safe procedure, with a complication rate comparable to other series published by neurosurgeons. The overall morbidity rate is comparable to, or even lower than, that caused by central vein catheterization. The procedure is also quite simple and modern disposable intracranial procedural kits are available. After the skin is prepped the landmark for skin incision, called the 'Kocher's point', located about 2-4 cm lateral to the midline (mid-pupillary line) and 2-3 cm anterior to the coronal suture, is found. Then the surgical field is prepared with the sterile drapes and the skin infiltrated with local anaesthetic (0.5% lidocaine with 1 : 200000 epinephrine). After skin incision and retraction of the skin and subcutaneous tissue, the periosteum should be scraped off in order to expose the skull. The skin is then divaricated, exposing the underlying bone. The hole is drilled with either an electric drill or a twist drill (the drilling procedure must be performed with the drill held within 10 degrees of the perpendicular position to the incision site). The hole is then irrigated with sterile saline and an 18-G spinal needle may be used to open the dura (exercise caution when perforating the dura

so as to avoid damage to the underlying structures). Following opening of the dura, the Bolt, containing a stylet, is screwed manually into the skull at approximately 5 mm to 1 cm for adults. The stylet is then removed after the bolt has been screwed in, after which the bolt should be filled with saline. Finally, the zeroing of the transducer is performed by simply holding the tip in air while zeroing on the monitor. The transducer is inserted inside the bolt and the screw tightened. The intracranial pressure value can then be read.

[Clin Radiol.](#) 2008 Apr;63(4):483-4. doi: 10.1016/j.crad.2007.08.020. Epub 2008 Feb 21.

Spinal needle improves adequate thyroid nodule cytology.

[Cappelli C](#), [Castellano M](#), [Gandossi E](#), [Pirola I](#), [De Martino E](#), [Delbarba A](#), [Agabiti Rosei E](#).

[J Endocrinol Invest.](#) 2008 Jan;31(1):25-8.

Spinal needle improves diagnostic cytological specimens of thyroid nodules.

[Cappelli C](#), [Tironi A](#), [Pirola I](#), [Gandossi E](#), [Delbarba A](#), [Agosti B](#), [Castellano M](#), [Agabiti Rosei E](#).

Source

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Abstract

Ultrasound fine needle aspiration cytology (US-FNAC) represents the most effective test available to distinguish between benign and malignant thyroid nodules, with an accuracy approaching 95%. The major limit of this procedure is the rate of inadequate specimens which is reported to be from 10% to 31%. Also because cost considerations have always been important and have recently become even more relevant for clinical guidelines in many countries, it is desirable to limit the number of inadequate samples. Recently, we have shown that the use of stylet needles greatly reduces inadequate cytological specimens in thyroid nodules with an intranodular vascular pattern. With the aim to improve our previous results, we have extended our procedure to all thyroid solid nodules. Between February 2004 and March 2006, 312 consecutive patients with thyroid nodule without intranodular vascular pattern at color-Doppler evaluation were enrolled in this prospective study. US-FNAC was performed by two different 25 gauge needles (Neolus [Ns] and Yale Spinal [YS]), and the two procedures were performed in alternate sequence on consecutive patients. Adequate specimens were observed in 145 (92.9%) and 153 (98%) nodules respectively investigated by Ns and in YS ($p < 0.005$). The total cost to obtain a cytological diagnosis by Ns was of euro 12210.2 (156+12 repeated US-FNAC), whereas it was of euro 12449.7 by YS (156+3 repeated US-FNAC). Our data suggest that spinal needles are associated with a low proportion of inadequate FNAC, without increase of total direct cost, considering also the number of FNAC repetitions needed; therefore, their routine use could be taken into account.

[Urology.](#) 2008 Apr;71(4):581-5. doi: 10.1016/j.urology.2007.10.059. Epub 2008 Feb 15.

Tubeless PCNL with patient in supine position: procedure for all seasons?--with comprehensive technique.

[Rana AM](#), [Bhojwani JP](#), [Junejo NN](#), [Das Bhagia S](#).

Source

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Abstract

OBJECTIVES:

Percutaneous nephrolithotomy (PCNL) has historically been performed with the patient in the prone position, which has inherent drawbacks. Supine PCNL has numerous benefits in terms of safety, efficacy, and versatility and is comparable with respect to vascular and bowel injury. This study was intended to prove that PCNL with the patient in the supine position is an alternative method of doing PCNL along with comprehensive technique.

METHODS:

A total of 184 patients with 191 renal units underwent tubeless supine PCNL from 2005 to May 2007. Their mean age was 32 years and mean weight 62 kg. After insertion of a retrograde 5F ureteral catheter, the patient was placed in the supine position with a small towel roll under the ipsilateral flank, raising it by 20 degrees. Caliceal entry was achieved with an 18-gauge spinal needle, and the tract was dilated up to 27F with Alkans dilators over a 0.032-in. guidewire using fluoroscope only, with the patient under general anesthesia.

RESULTS:

Primary stone clearance was achieved in 84% patients. Of the 184 patients, 94% had a single and 6% had a double tract; 72% of patients had a lower, 25% a middle, and 3% an upper caliceal puncture. The mean single stone size was 3.5 cm, and the mean multiple stone burden was 12 cm. No vascular or splanchnic injury or bowel transgression was observed. Tubeless PCNL was possible in 87% patients; 4% patients required transfusion, and 1 patient each had a perinephric collection and a plural effusion.

CONCLUSIONS:

Tubeless PCNL with the patient in the supine position is an independent method of treating renal stones without complementing PCNL in the prone position. It adds ease and comfort to the patient, anesthesiologist, and surgeon.

[Knee Surg Sports Traumatol Arthrosc.](#) 2008 Jul;16(7):683-6. doi: 10.1007/s00167-007-0483-9. Epub 2008 Jan 19.

Arthroscopic all-inside repair of anterior horn tears of the lateral meniscus using a spinal needle.

[Cho JH](#).

Source

The Department of Orthopaedic Surgery, Inje University, Ilsan Paik Hospital, Goyang-si, Gyeonggi-do, South Korea. osd07@ilsanpaik.ac.kr

Abstract

Several techniques have been used for the arthroscopic repair of anterior horn tears of the lateral meniscus. A commonly used method is the outside-in technique. This technique is

known to be the most appropriate and safest technique for peripheral tears of the anterior horn of the lateral meniscus. But it has the disadvantage of making an additional 1-2 cm sized skin incision and tying knots subcutaneously over the capsule. Irritation may also occur. We have developed a new alternative repair method to prevent this skin incision and preserve the normal biomechanics of the lateral meniscus during motion. These techniques are modified methods of the outside-in meniscal repair using a spinal needle. They are as simple as conventional outside-in technique. In addition, they have advantages of vertical mattress suture, which is an important characteristic of the all-inside repair, and no additional incision. We recommend these methods as an alternative technique for repairing an anterior horn tear of the lateral meniscus.

[Pain Physician](#). 2007 Nov;10(6):757-63.

Inferior hypogastric plexus blockade: a transsacral approach.

[Schultz DM](#).

Source

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dschultz@painphysicians.com

Abstract

BACKGROUND:

Despite recent refinements in the technique of hypogastric plexus blockade, the lower pelvic organs and genitalia are innervated by fibers from the pre-sacral inferior hypogastric plexus and these fibers are not readily blocked using paravertebral or transdiscal approaches.

DESIGN:

Report of a technique to introduce a transsacral approach to blockade of the inferior hypogastric plexus.

METHODS:

A technique for performing inferior hypogastric plexus blockade by passing a spinal needle through the sacral foramen is described with 15 blocks in 11 patients.

RESULTS:

Fifteen inferior hypogastric plexus blocks were performed on 11 female patients who presented with chronic pelvic pain. Pelvic pain was decreased following 11 of the procedures with pre- and post-pain scores (SD) of 7.4 (2.3) and 5.0 (2.7), respectively ($P < 0.05$). There were no complications or unusual occurrences.

CONCLUSIONS:

This block can be performed safely and effectively if the interventionalist has a high degree of familiarity with sacral anatomy, refined needle steering technique, and expertise in fluoroscopy. Properly performed, transsacral blockade of the inferior hypogastric plexus is a safe technique for the diagnosis and treatment of chronic pain conditions involving the lower pelvic viscera.

[Arthroscopy](#). 2007 Nov;23(11):1241.e1-5. Epub 2007 Apr 6.

The axillary pouch portal: a new posterior portal for visualization and instrumentation in the inferior glenohumeral recess.

[Bhatia DN](#), [de Beer JF](#).

Source

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Abstract

Arthroscopic access to the inferior glenohumeral recess is necessary in several surgical procedures on the shoulder. Posteroinferior portals described for access to this region may pose a theoretic risk to the posterior neurovascular structures (outside-in technique) and to the articular cartilage (inside-out technique). The first author (D.N.B.) has devised a new posterior portal that permits direct linear access to the entire inferior glenohumeral recess. The portal is placed higher and more lateral compared with the previously described portals; this places it further away from the posterior neurovascular structures and facilitates linear access to the axillary pouch. The portal is created via an outside-inside technique, with a spinal needle to ascertain the correct portal site and angulation. The portal is placed at a mean distance of 20.45 +/- 4.9 mm (range, 15 to 35 mm) directly inferior to the lower border of the posterolateral acromial angle and 21.3 +/- 2 mm (range, 20 to 25 mm) lateral to the posterior viewing portal. The spinal needle or cannula is angulated medially at a mean of 30.6 degrees +/- 4.7 degrees (range, 25 degrees to 40 degrees) in the axial plane and slightly inferiorly (mean, 2 degrees ; range, 20 degrees superiorly to 20 degrees inferiorly). Use of 30 degrees and 70 degrees arthroscopes through the axillary pouch portal facilitates visualization of the entire recess and of the humeral attachment of the inferior glenohumeral ligament complex for evaluation of humeral avulsion of the glenohumeral ligament lesions. The portal also permits instrumentation in combination with the standard posterior or anterosuperior viewing portal for removal of loose bodies, synovectomy, capsular shrinkage, capsulotomy, and anchor placement in the posteroinferior glenoid rim.

[Arch Orthop Trauma Surg](#). 2008 Nov;128(11):1251-4. Epub 2007 Oct 5.

Modified single-portal type II SLAP repair.

[Kim KC](#), [Rhee KJ](#), [Shin HD](#), [Kim YM](#).

Source

Department of Orthopaedic Surgery, Chungnam National University College of Medicine, 640 Daesa-Dong, Jung-Gu, Daejeon , 301-040, South Korea. kckim@cnuh.co.kr

Abstract

We present a simplified, cost-effective method for repairing a type II SLAP lesion that requires only one working portal in the rotator interval. The rotator cuff tendon or muscle is not violated when using this portal. The biceps root can be firmly reattached anteriorly and posteriorly using one double-loaded absorbable bone anchor with a suture eyelet. By retrieving the anterior limbs of the anchor percutaneously using a spinal needle and PDS suture, tangling of the anchor suture or premature knot formation are avoided during shuttling and knot tying.

[Arthroscopy](#). 2007 Sep;23(9):999-1005.

The anatomy and function of the low posterolateral portal in addressing posterior labral pathology.

[Nord KD](#), [Brady PC](#), [Yazdani RS](#), [Burkhart SS](#).

Source

Sports, Orthopedics & Spine, Jackson, Tennessee 38301, USA. shoulderdrnord@yahoo.com

Abstract

PURPOSE:

A standard posterior portal allows excellent visualization of the glenohumeral joint but is inadequate for anchor placement because of its parallelism to the glenoid surface. The purpose of this study was to describe the low posterolateral portal for glenohumeral arthroscopy, describe the anatomy of the portal and surrounding structures, and discuss the portal's usefulness in addressing posterior and inferior shoulder pathology.

METHODS:

Five cadaveric shoulders were dissected after placement of a spear through the low posterolateral portal. The location was identified via a spinal needle, 2 to 4 cm lateral and 4 to 5 cm inferior to the posterolateral corner of the acromion. Measurements from the spear to the anatomic structures were recorded with a caliper. Seventeen patients with posterior labral pathology were included in this study. The low posterolateral portal was established while visualizing through the anterosuperolateral or posterior portal. The spear and anchor were inserted through the low posterolateral portal.

RESULTS:

Five shoulders were dissected, and the neurovascular structures relative to the low posterolateral portal were identified. The portal was 13.8 +/- 1.6 mm from the axillary nerve and 13.4 +/- 1.2 mm from the posterior humeral circumflex artery. In the retrospective review the low posterolateral portal was created without difficulty or complication in all 17 patients. The portal was extremely helpful for anchor insertion in the posteroinferior glenoid. It was useful in suture passage through the posterior and inferior labrum and in suture management.

CONCLUSIONS:

The low posterolateral portal provides the optimal angle for insertion of instruments and anchors, resulting in a more anatomic repair.

CLINICAL RELEVANCE:

The standard 3 portals are not optimal for approaching posterior and inferior labral tears, and use of the low posterolateral portal improves access and treatment.

[Equine Vet J](#). 2007 Jul;39(4):356-9.

Comparison of 2 methods of centesis of the bursa of the biceps brachii tendon of horses.

[Schumacher J](#), [Livesey L](#), [Brawner W](#), [Taintor J](#), [Pinto N](#).

Source

Department of Clinical Sciences, College of Veterinary Medicine, Auburn University, Auburn, Alabama 36849, USA.

Abstract

REASONS FOR PERFORMING STUDY:

Centesis of the bicipital bursa using an 8.9 cm long spinal needle has been reported but the alternative of employing a 3.8 cm long hypodermic needle requires validation.

OBJECTIVE:

To compare the efficacy of 2 different methods of centesis of the bicipital bursa and to evaluate the usefulness of ultrasonographic imaging to determine the location of solution administered when centesis of the bursa is attempted.

METHODS:

For Trial 1, 6 clinicians, who had no previous experience of centesis of the bicipital bursa, attempted to inject a solution composed of an aqueous radiopaque contrast medium and physiological saline solution (PSS) into the bicipital bursae of 2/12 horses using the previously described distal approach to inject one bursa and a proximal approach to inject the contralateral bursa. The bicipital tendon and bursa were examined ultrasonographically before and after injection; and both shoulders were examined radiographically to identify the location of the medium. In Trial 2, another 6 clinicians, also with no previous experience of centesis, repeated Trial 1, using 6 horses, but the radiopaque contrast medium was mixed with air instead of PSS.

RESULTS:

Accuracy of centesis using the proximal approach was 39% and that of the distal approach 28%. Ultrasonographic examination of the shoulder allowed the location of solution and air to be accurately predicted in all 12 shoulders examined.

CONCLUSIONS:

Clinicians who have had no previous experience performing centesis of the bicipital bursa are unlikely to be successful in centesis using either approach. Radiographic examination after injecting a radiopaque contrast medium may be necessary to assess the success of centesis especially if bursal fluid is not obtained during centesis. Injecting air along with the radiopaque contrast medium provides more accurate ultrasonographic confirmation of centesis and better radiographic definition than does injection without air.

[Knee Surg Sports Traumatol Arthrosc.](#) 2008 Jan;16(1):94-7. Epub 2007 Aug 1.

Arthroscopic all-inside repair of Palmer type 1B triangular fibrocartilage complex tears: a technical note.

[Lee CK](#), [Cho HL](#), [Jung KA](#), [Jo JY](#), [Ku JH](#).

Source

Department of Orthopaedic Surgery, Good Samsun Hospital, 193-5 Churye-Dong, Sasang-Gu, Pusan 617-718, Korea. choonkey@hanmail.net

Abstract

Arthroscopic repair of peripheral dorso-ulnar triangular fibrocartilage complex (TFCC) lesions is now a preferred method. Both outside-in and inside-out techniques are commonly performed for repairing Palmer type 1B TFCC tear. But these techniques have disadvantages of making an additional skin incision to tie knots subcutaneously over the capsule. We performed an arthroscopic all-inside repair technique of Palmer type 1B TFCC tears, which is a modified method of the outside-in technique using a spinal needle. This all-inside technique is as simple as previously described arthroscopic techniques and also has advantages of vertical mattress suture and no additional incision. We recommend this technique as a useful alternative to the others for repairing Palmer type 1B TFCC tear.

[Minerva Urol Nefrol.](#) 2007 Jun;59(2):137-41.

Obturator nerve block and transurethral surgery for bladder cancer.

[Tatlisen A](#), [Sofikerim M](#).

Source

Department of Urology, Erciyes University School of Medicine, Kayseri, Turkey.

Abstract

AIM:

The obturator nerve may be accidentally stimulated during transurethral resection of lateral bladder wall tumors, causing adductor spasms. In this study, we evaluated the results of obturator nerve block (ONB) produced via a blind anatomical approach.

METHODS:

Between April 2004 and April 2006, 114 patients with bladder tumors located on the lateral bladder wall had undergone transurethral resection of the bladder tumor (TUR-BT) at our clinic. Sixty-three patients with adductor spasms received local anesthetic ONB; no adductor spasms were observed in the remaining 51 patients. ONB was obtained with 10 mL of 1% prilocaine infiltrated through a 22 G spinal needle using a blind anatomical approach.

RESULTS:

Two of the 63 patients were excluded from the study due to bladder wall perforations caused by adductor spasms. Successful ONB was performed unilaterally in 61 patients. Muscle spasms were absent in 59 of the 61 patients (97%). In 2 patients receiving spinal anesthesia, and in whom total resection of bladder tumors was performed, adductor muscle spasms were seen during deep resection of the tumor bed, which prevented surgery from proceeding further.

CONCLUSION:

ONB for the prevention of adductor spasms is a useful technique for the prevention of deep and uncontrolled cuts in the dorso-lateral part of the bladder wall during TUR-BT. The blind anatomical approach is a simple and easy procedure, with a high success rate.

[Arthroscopy.](#) 2007 Apr;23(4):439.e1-2. Epub 2007 Jan 18.

The Di Giacomo technique: simplified suture passing in SLAP repair.

[Selby RM](#), [Altchek DW](#), [Di Giacomo G](#).

Source

St. Vincent's Hospital and Medical Center of New York, New York, New York, USA.
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Abstract

A 30 degrees arthroscope is introduced via the posterior soft spot portal, and an anterosuperior portal is created with the use of a 7-mm disposable cannula. The anterosuperior portal is used for instrumentation. An 18-gauge spinal needle is passed via the

portal of Neviaser and the rotator cuff into arthroscopic view above the superior labrum. A No. 1 polydioxanone suture (PDS; Ethicon, Somerville, NJ) is advanced through the spinal needle. An arthroscopic retriever or meniscal clamp is used to retrieve the free end of the suture and bring it out through a small anterior stab wound. A suture anchor is inserted via the anterosuperior portal into the superior neck of the glenoid. The more medial limb of the No. 2 Ethibond suture (Ethicon) from the suture anchor is retrieved with the inferior limb of the No. 1 PDS suture, and both are brought out through the anterosuperior cannula. The opposite end of the No. 1 PDS suture is then manually pulled, while, under direct arthroscopic visualization, the No. 2 Ethibond suture, now tied to the opposite end of the PDS, is pulled through the superior labral tissue. That anchor suture is retrieved and is placed outside the cannula that contains the other anchor suture. Standard arthroscopic knot tying is then employed.

[Knee Surg Sports Traumatol Arthrosc.](#) 2007 Nov;15(11):1335-9. Epub 2007 Mar 16.

Arthroscopic all-inside repair techniques of lateral meniscus anterior horn tear: a technical note.

[Lee CK](#), [Suh JT](#), [Yoo CI](#), [Cho HL](#).

Source

Department of Orthopaedic Surgery, Good Samsun Hospital, 193-5 Churye-Dong, Sasang-Gu, Pusan 617-718, Korea. choonkey@hanmail.net

Abstract

Although the conventional outside-in technique is especially useful for repairing tears in the anterior portion of the meniscus, it has a disadvantage of making an additional 1-2 cm sized skin incision and tying knots subcutaneously over the capsule. Therefore we devised two all-inside repair techniques of lateral meniscus anterior horn tear according to the site of meniscal tear, meniscosynovial junction or red-red zone. Because these techniques are modified methods of the outside-in meniscal repair using a spinal needle, they are as simple as conventional outside-in technique. In addition they have advantages of vertical mattress suture, which is an important characteristic of the all-inside repair, and no additional incision. We recommend these techniques as an alternative method for repairing an anterior horn tear of the lateral meniscus.

[Arch Soc Esp Oftalmol.](#) 2007 Mar;82(3):147-52.

[Anesthesia for vitreoretinal surgery using a retrobulbar catheter technique].

[Article in Spanish]

[Falcó-Molmeneu E](#), [Sorlí-Clemente E](#), [Ramos-Martí F](#), [Cabrera-Peset A](#), [Andrés-Calvo G](#), [Peris-Molés M](#).

Source

Hospital General de Castellón, España.

Abstract

OBJECTIVE:

To evaluate peroperative pain management using a flexible spinal anesthesia catheter introduced into the retrobulbar space which allows injections of local anesthetics for vitreoretinal surgery.

METHODS:

Twenty-five patients who underwent vitreoretinal surgery receiving retrobulbar anesthesia with 3.5 ml ropivacaine 0.75%. After injection, a catheter with spinal needle 22G x 1 1/2 (40 x 0.7 mm) was introduced to the retrobulbar muscle cone. The needle was withdrawn and the catheter was fixed. When the patient started to feel pain (grade 3 or higher), 2 ml ropivacaine 0.75% was administered through the catheter during surgery or 2 ml ropivacaine 0.2% in the postoperative period. The catheter was removed 24- 48h later.

RESULTS:

During surgery, 1 patient (4%) received a re-injection of 2 ml ropivacaine 0.75% because of pain. Three patients (12%) experienced pain of grade 3 or higher in the postoperative period and needed re-injection of 2 ml ropivacaine 0.2%. Re-injections were an effective method to achieve analgesia. Adverse effects were not noticed.

CONCLUSIONS:

The retrobulbar catheter technique is a procedure which allows multiple re-injections of local anesthetics; it provides adequate analgesia during surgery and rapid, effective and safe postoperative pain management.

[Arthroscopy](#). 2007 Mar;23(3):321.e1-4. Epub 2007 Jan 5.

Single-portal SLAP lesion repair.

[Daluga DJ](#), [Daluga AT](#).

Source

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Abstract

SLAP lesions are increasingly being recognized as a common cause of shoulder pain. Because an intact superior labral complex is required for peak performance of the shoulder, it is critical that all arthroscopic surgeons are able to recognize and repair these injuries. The most common method of repair involves at least 2 additional portals. The area of repair can become quite crowded, and the method can be challenging at times. A simple and highly reproducible technique is described. This technique requires only an anterior portal for suture management and no special instrumentation. A 5-mm anterior portal is established along with a standard posterior portal. A spinal needle is inserted from the anterior-lateral aspect of the acromion to identify the most desirable location for the suture anchor. After placement of the suture anchor, a second spinal needle is placed in the area of the subclavian portal. This needle is passed through the base of the biceps origin. PDS suture (Ethicon, Somerville, NJ) is placed through the needle and captured with a standard grasper. Before the needle is removed, a loop grasper or crochet hook is used to locate the needle. This prevents the suture from getting caught in hypertrophic tissue. A standard switching technique is then performed, and both sutures are brought out of the anterior portal and tied. This technique is simple and reproducible and requires no special instrumentation.

[J Ultrasound Med](#). 2007 Feb;26(2):233-7.

Sonographically guided flexor hallucis longus tendon sheath injection.

[Mehdizade A, Adler RS.](#)

Source

Department of Radiology and Imaging, Hospital for Special Surgery, Weill Medical College of Cornell University, 535 E 70th St, New York, NY 10021 USA.

Abstract

OBJECTIVE:

The purpose of this study was to describe a sonographically guided technique to perform flexor hallucis longus (FHL) tendon sheath injections.

METHODS:

Scans were performed with an intermediate-frequency (7.5- to 12-MHz) linear transducer with the scan plane corresponding to the anatomic axial plane and the patients positioned prone. The transducer was placed along the posteromedial ankle with the needle entry point being lateral to the Achilles tendon. A 25-gauge, 1.5-in needle or a 22-gauge spinal needle was positioned directly into the tendon sheath during real-time visualization with injection of a standardized therapeutic mixture (anesthetic and long-acting corticosteroid) at the level of the posterior sulcus for the FHL. Distention of the tendon sheath during real-time visualization was considered a successful injection.

RESULTS:

Twenty-four injections in 20 patients (12 female and 8 male; age range, 22-64 years) were performed with this technique. In each case, distention of the FHL tendon sheath was obtained as the desired end point. Apart from minor paresthesias from local anesthesia, no long-term complications from these injections have occurred to date.

CONCLUSIONS:

We describe a method to perform sonographically guided injections of the FHL tendon sheath. Sonography provides several distinct advantages as a method to provide guidance for delivery of therapeutic injections. The most important of these is the ability to visualize the needle and make adjustments in real time to ensure that medication is delivered to the appropriate location. Given these advantages, we propose that sonographic guidance provides an excellent alternative in the administration of corticosteroids to the FHL tendon sheath.

[Fertil Steril.](#) 2007 Feb;87(2):405-10. Epub 2006 Nov 15.

Fluoroscopically guided synechiolysis for patients with Asherman's syndrome: menstrual and fertility outcomes.

[Thomson AJ, Abbott JA, Kingston A, Lenart M, Vancaillie TG.](#)

Source

Department of Endo-Gynaecology, University of New South Wales, Royal Hospital for Women, Randwick, Sydney, New South Wales, Australia.
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Abstract

OBJECTIVE:

To describe a 5-year experience of fluoroscopically guided hysteroscopic synechiolysis for Asherman's syndrome.

DESIGN:

Retrospective, uncontrolled cohort study.

SETTING:

Department of Endo-Gynaecology, University of New South Wales, Royal Hospital for Women, Randwick, Sydney, New South Wales, Australia.

PATIENT(S):

Thirty consecutive patients with confirmed Asherman's syndrome (March 1999-March 2004).

INTERVENTION(S):

Women had hysteroscopy performed under general anesthetic, with the use of a spinal needle in parallel to the hysteroscope to perform synechiolysis. The progress of the procedure was determined by injecting radiographic contrast medium, and visualized with the use of an image intensifier. Individual procedures were terminated when the endometrial cavity was reconstructed, or at 60 minutes. Cyclic high-dose estrogen therapy was used to stimulate endometrial proliferation. Repeat procedures were performed monthly until the endometrial cavity was reestablished.

MAIN OUTCOME MEASURE(S):

Menstrual and fertility outcomes were obtained from patient records and by postal questionnaire.

RESULT(S):

Thirty patients were treated for Asherman's syndrome (13% AFS Grade I, 43% AFS Grade II, and 43% AFS Grade III). Prior to treatment, 60% of patients were amenorrheic. The median number of procedures per patient was 1.5 (range, 1-6), and the mean length of the procedure was 42 minutes (range, 10-70 minutes). After treatment, 96% had regular menses. Seventeen patients attempted to conceive after surgery, and 9 (53%) were successful.

CONCLUSION(S):

Hysteroscopic synechiolysis under image-intensifier control appears to be an effective treatment for Asherman's syndrome.

[Eur Respir J](#). 2007 Feb;29(2):357-62. Epub 2006 Nov 1.

Ultrasound-assisted transthoracic biopsy: fine-needle aspiration or cutting-needle biopsy?

[Diacon AH](#), [Theron J](#), [Schubert P](#), [Brundyn K](#), [Louw M](#), [Wright CA](#), [Bolliger CT](#).

Source

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Abstract

The present study compared the diagnostic yield of ultrasound-assisted cutting-needle biopsy (CNB) and fine-needle aspiration biopsy (FNAB) in chest lesions. A physician performed ultrasound and FNAB with a 22-G spinal needle in all patients, directly followed by a 14-G CNB in patients without contraindication. A total of 155 consecutive lesions arising from the lung (74%), pleura (12%), mediastinum (11%) or chest wall (3%) in patients with a final diagnosis of lung carcinoma (74%), other malignant tumours (12%), non-neoplastic disease (9%) or unknown (5%) were prospectively included. The overall diagnostic yield was 87%.

Combined specimens were obtained in 123 lesions (79%). In these, yields of FNAB, CNB and both methods combined were 82, 76 and 89%, respectively. FNAB was significantly better than CNB in lung carcinoma (95 versus 81%) but CNB was superior in noncarcinomatous tumours and in benign lesions. On-site cytology was 90% sensitive and 100% specific for predicting a positive FNAB. One patient required drainage for pneumothorax (0.6%). Ultrasound-assisted fine-needle aspiration biopsy performed by chest physicians is an accurate and safe initial diagnostic procedure in patients with a high clinical probability of lung carcinoma. All other patients should undergo concurrent fine-needle aspiration biopsy and cutting-needle biopsy.

[Comput Aided Surg.](#) 2006 Jul;11(4):194-201.

Flexible needle steering for percutaneous therapies.

[Glozman D](#), [Shoham M](#).

Source

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Abstract

OBJECTIVE:

A robotic system is presented for flexible needle steering and control in soft tissue.

MATERIALS AND METHODS:

Flexible needle insertion into a deformable tissue is modeled as a linear beam supported by virtual springs, where the stiffness coefficients of the springs can vary along the needle. Using this simplified model, the forward and inverse kinematics of the needle are solved analytically, thus enabling both path planning and path correction in real time. Given target and obstacle locations, the computer calculates the needle tip trajectory that will avoid the obstacle and hit the target. Using the inverse kinematics algorithm, the corresponding needle base maneuver needed to follow this trajectory is calculated.

RESULTS:

It is demonstrated that the needle tip path is not unique and can be optimized to minimize lateral pressure of the needle body on the tissue. Needle steering, i.e., the needle base movements that steer the needle tip, is not intuitive. Therefore, the needle insertion procedure is best performed by a robot. The model was verified experimentally on muscle and liver tissues by robotically assisted insertion of a flexible spinal needle. During insertion, the position and shape of the needle were recorded by X-ray.

CONCLUSIONS:

This study demonstrates the ability to curve a flexible needle by its base motion in order to achieve a planned tip trajectory.

[Obstet Gynecol.](#) 2006 Sep;108(3 Pt 1):591-2.

Amnioinfusion to facilitate external cephalic version after initial failure.

[Adama van Scheltema PN](#), [Feitsma AH](#), [Middeldorp JM](#), [Vandenbussche FP](#), [Oepkes D](#).

Source

Department of Obstetrics, Leiden University Medical Centre, Leiden, the Netherlands.

Abstract

OBJECTIVE:

To evaluate the effectiveness of antepartum transabdominal amnioinfusion to facilitate external cephalic version after initial failure.

METHODS:

Women with a structurally normal fetus in breech lie at term, with a failed external cephalic version and an amniotic fluid index (AFI) less than 15 cm, were asked to participate in our study. After tocolysis with indomethacin, a transabdominal amnioinfusion was performed with an 18G spinal needle. Lactated Ringers solution was infused until the AFI reached 15 cm, with a maximum of 1 L. External cephalic version was performed directly afterward.

RESULTS:

Seven women participated in the study. The gestational age of the women was between 36(+4) and 38(+3) weeks, and three women were primiparous. The AFI ranged from 4 cm to 13 cm. A median amount of 1,000 mL Ringers solution (range 700-1,000 mL) was infused per procedure. The repeat external cephalic versions after amnioinfusion were not successful in any of the patients.

CONCLUSION:

In our experience, amnioinfusion does not facilitate external cephalic version.

[Arthroscopy](#). 2006 Aug;22(8):908.e1-4.

New meniscus repair technique for peripheral tears near the posterior tibial attachment of the posterior horn of the medial meniscus.

[Park IS](#), [Kim SJ](#).

Source

Department of Orthopaedic Surgery, Yonsei University College of Medicine, Seoul, Korea.

Abstract

We introduce a suture technique to repair a peripheral tear near the posterior tibial attachment of the posterior horn. A suture hook was inserted through the posteromedial portal, and the peripheral capsular rim was penetrated from superior to inferior by the sharp hook. Both relay limbs were brought out through the posteromedial portal. The outer limb of the superior peripheral capsular rim was identified with a hemostat. An 18-gauge spinal needle loaded with a No. 0 polydioxanone suture (PDS) was introduced into the joint from the anteromedial portal; it was passed through the joint space until it penetrated the inner torn meniscus. The PDS suture loaded within the needle was pushed into the joint and picked up through the posteromedial portal. The needle was pulled out of the torn meniscus and readvanced over it while the suture was kept loaded. The other limb of the suture from the tip of the spinal needle was retrieved through the posteromedial portal. The initial PDS suture limb was hooked to the shuttle-relay system; it then was passed through the inner torn meniscus and the peripheral capsular rim. The suture limb exiting from the peripheral capsular rim was used as a post and was joined to the other suture limb to form a sliding knot.

[Ultrasound Obstet Gynecol.](#) 2006 Jul;28(1):82-8.

Ultrasound-guided injection and occlusion of the trachea in fetal sheep.

[David AL](#), [Weisz B](#), [Gregory L](#), [Themis M](#), [Cook T](#), [Roubliova X](#), [Deprest J](#), [Coutelle C](#), [Rodeck CH](#), [Peebles DM](#).

Source

Department of Obstetrics and Gynaecology, Royal Free and University College Medical School, University College London, London, UK. a.david@ucl.ac.uk

Abstract

OBJECTIVES:

To access the fetal sheep trachea by ultrasound-guided transthoracic injection in order to deliver gene therapy vectors or occlude the trachea with a detachable balloon.

METHODS:

Fetal sheep were operated on at a mean gestational age of 102 (range, 81-116) days (term = 145 days). Under ultrasound guidance, either a 20-G spinal (for vector delivery) or a 16-G Kellett (for placement of an occlusive balloon) needle was inserted via the fetal thorax into the fetal trachea.

RESULTS:

Using the 20-G spinal needle the trachea was accessed successfully in 33/36 fetuses, with 97% survival. Failure to inject was related to fetal position and gestational age. Blood vessel damage causing significant morbidity occurred in two fetuses (6%). Tracheal occlusion was achieved by puncturing the trachea with the 16-G needle and advancing an endoluminal balloon in three out of five attempts in a mean time of 17 (range, 16-19) min, with 100% survival. In one case, the balloon became sited within the accessory lobe bronchus and was not inflated. At postmortem examination 21 days later, all balloons remained inflated and occluded the trachea, and the lung-to-body weight ratio and airways morphometric indices were consistent with relative pulmonary hyperplasia in the obstructed lungs.

CONCLUSIONS:

Ultrasound-guided transthoracic tracheal puncture is a reliable technique in fetal sheep, with low morbidity and mortality. Using this technique, a detachable endotracheal balloon can be placed to provoke pulmonary growth. Advances in needle design and balloon size may improve the success rate.

[Clin J Pain.](#) 2006 Jul-Aug;22(6):538-43.

Ultrasound-guided facet joint injections in the middle to lower cervical spine: a CT-controlled sonoanatomic study.

[Galiano K](#), [Obwegeser AA](#), [Bodner G](#), [Freund MC](#), [Gruber H](#), [Maurer H](#), [Schatzer R](#), [Fiegele T](#), [Ploner F](#).

Source

Clinic of Neurosurgery, Innsbruck Medical University, 6020 Innsbruck, Austria.

Abstract

OBJECTIVES:

The aim of this study was to investigate the efficacy of ultrasound as a guiding tool for simulated cervical facet joint injections in cadavers.

METHODS:

A total of 40 ultrasound examinations at 5 levels (C6-7 to C2-3) were performed on 4 embalmed cadavers. The zygapophyseal joints were located with ultrasound. First, the transverse processes of C6 and C7 were established and the facet joint of C6-7 was demonstrated. The midpoint of this joint space, defined as the middle of its cranio-caudal extension on its lateral surface, was taken as a reference point. Ipsilateral distances (A, B, C, and D) between this point and each one of the 4 facet joints of the cervical spine up to the facet joints C2-3 were then computed. Subsequently, coronal computed tomography (CT) scans were taken to verify these distances. In a second experiment, a spinal needle was advanced under ultrasound guidance to the zygapophyseal joints from C2-3 to C6-7 on both sides of 1 cadaver. The exact placement of the needle tips was again verified by CT.

RESULTS:

In 4 attempts, a depiction of the joint space was not possible. Ultrasound and CT provided the same mean measurements of 1.2 \pm 0.2 cm, 2.0 \pm 0.3 cm, 3.0 \pm 0.2, and 4.0 \pm 0.5 cm for distances A, B, C, and D, respectively. All 10 needle tips were located in the joint space during simulated facet joint injections, as also verified by CT.

DISCUSSION:

This preclinical study suggests that ultrasound is a useful guiding tool for facet joint injections in the cervical spine.

[Arthroscopy](#). 2006 Jun;22(6):688.e1-3.

Engaging needles: a simple technique for arthroscopic side-to-side rotator cuff repair.

[Almazán A](#), [Nieves J](#), [Patiño P](#), [Ruiz M](#), [Cruz F](#), [Pérez FX](#), [Ibarra C](#).

Source

Arthroscopy and Sports Medicine Department, National Rehabilitation Institute, Mexico City, Mexico. docalmazan@hotmail.com

Abstract

We present a simplified technique for the side-to-side arthroscopic rotator cuff repair. The instruments required for this technique are a 45 degrees Suture Lasso (SL; Arthrex, Naples, FL) and a 17F spinal needle (SN). With the arthroscope in the lateral portal, the SL is inserted through the posterior cannulas to grab healthy tissue at the posterior margin of the cuff. Through the anterior cannulas or through a skin puncture, the SN is inserted to catch healthy tissue at the anterior margin. Once both instruments are through the tissues, we manipulate them to make their tips converge. Because the SN diameter is small, it is very easy to engage its tip into the SL tip. Once engaged, a No. 1 PDS monofilament suture is easily passed through both instruments. When the suture comes out of the SL handle, both instruments can be pulled out, leaving the suture in place. Using a suture retriever clamp, the sutures are retrieved through a cannula for knot tying. This technique can be repeated as many times as necessary to place enough sutures in a side-to-side fashion to achieve the repair.

[Arthroscopy](#). 2006 Jun;22(6):681.e1-2.

Double suture technique to delineate PASTA lesions.

[Sperling JW](#), [Dahm DL](#).

Source

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Abstract

A common method of treating PASTA (partial articular surface tendon avulsion) lesions involves completing the tear followed by arthroscopic repair. Frequently, the boundaries of the tear are difficult to determine from the bursal side with the use of a single marking stitch. Therefore, we describe a simple technique that allows the surgeon to reproducibly define the boundaries of the partial tear. Following a standard arthroscopic examination of the articular portion of the shoulder joint, the PASTA lesion is identified. A spinal needle is introduced and the most anterior and posterior aspects of the tear are marked by passing 2 sutures. Following a bursectomy, the 2 sutures that clearly define the boundaries of the tear are identified. The tear is then completed by "connecting the dots" outlined by the sutures and an arthroscopic repair is performed in the standard manner.

[Endocr Pathol](#). 2005 Winter;16(4):349-54.

Cost-effectiveness of fine-needle-aspiration cytology of thyroid nodules with intranodular vascular pattern using two different needle types.

[Cappelli C](#), [Tironi A](#), [Mattanza C](#), [Cumetti D](#), [Agosti B](#), [Gandossi E](#), [Pirola I](#), [De Martino E](#), [Cherubini L](#), [Micheletti L](#), [Castellano M](#), [Rosei EA](#).

Source

Internal Medicine and Endocrinology, University of Brescia, Italy. cappi.tsh@libero.it

Abstract

OBJECTIVE:

To compare the cytological findings of hypoechoic thyroid nodules with intranodular vascular pattern (pattern II) obtained by two different needles (Neolus 25 gauge, Chemil, Wenzhou, China vs Yale Spinal 25 gauge, Becton Dickinson, Madrid, Spain) in euthyroid patients and to evaluate their cost-effectiveness.

METHODS:

From January 2001 to December 2003, 480 euthyroid patients with a hypoechoic thyroid nodule pattern II were referred for US-FNAC. The nodules were alternatively evaluated by Neolus or by Yale Spinal with the stylet (YS+) or without the stylet (YS-), in order to evaluate if the cytological results could be due to the presence of the stylet or to the different length of the two needles. For each nodule two passes were performed and the material was obtained by capillary action. Material was smeared on slides, fixed, and stained by Papanicolaou techniques. Cytological specimens were evaluated in blind by the same experienced cytopathologist.

RESULTS:

Inadequate cytological specimens because of blood contamination were present in 30 (18.7%) samples by Neolus needle and in 22 (13.8%) by YS- compared to only 5 (3.1%) by YS+. In 6 (20%) cases of the 30 repeated US-FNAC by Neolus and in 4 (18%) of the 22 US-

FNAC by YS-, material remained inadequate for diagnosis because of blood contamination. All the five repeated samples obtained by YS+ became adequate for diagnosis and resulted benign nodules. Direct costs of US-FNAC procedure are currently 72.30 Euro including cytological examination. The cost of Neolus and Yale needles is 0.19 Euro and 3.0 Euro, respectively. The estimated total cost to obtain a cytological diagnosis by a Neolus needle (160 + 30 repeated US-FNAC) was 13809.2 Euro vs 12919.5 Euro by Yale Spinal needle (160 + 5 repeated US-FNAC).

CONCLUSION:

This study demonstrates that the use of Yale Spinal needles greatly reduces inadequate cytological specimens, and therefore limits both direct and indirect costs.

[Am J Obstet Gynecol.](#) 2006 Apr;194(4):1137-42; discussion 1142-4.

The use of needle biopsy for assessment of placental gene expression.

[Sadovsky Y](#), [Wyatt SM](#), [Collins L](#), [Elchalal U](#), [Kraus FT](#), [Nelson DM](#).

Source

Department of Obstetrics and Gynecology, Washington University School of Medicine, St Louis, MO, USA.

Abstract

OBJECTIVE:

The purpose of this study was to test the hypothesis that placental samples that are obtained by needle aspiration ex vivo are useful for the determination of villus gene expression.

STUDY DESIGN:

Placental biopsy was performed with a spinal needle after uncomplicated deliveries. Villi were inspected microscopically, and RNA was extracted and analyzed with capillary electrophoresis. Gene expression was determined with quantitative polymerase chain reaction.

RESULTS:

We obtained more placental villous fragments per aspiration using a 20-gauge needle (5.2 +/- 1.8 fragments) than with a 22-gauge needle (3.3 +/- 1.6 fragments; P < .01). RNA quality was adequate, based on the 28S and 18S recombinant RNA bands, with a mean 260/280 ratio of 1.88. The amount of extracted RNA correlated with the number of villous fragments per aspirate. Importantly, the expression of NDRG1 and hPL, both markedly altered in hypoxia, was consistent between villi that were obtained by either needle or standard biopsy.

CONCLUSION:

Placental samples that are obtained by ex vivo needle aspiration are useful for the extraction of RNA and for the determination of villous gene expression.

[Obstet Gynecol.](#) 2006 Feb;107(2 Pt 2):463-6.

Diagnosis of placental abscess in association with recurrent maternal bacteremia in a twin pregnancy.

[Meiowitz NB](#), [Fleischer A](#), [Powers M](#), [Hippolyte F](#).

Source

Long Island Jewish Medical Center, New Hyde Park, New York 11040, USA.
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Abstract

BACKGROUND:

Placental abscess formation is rarely recognized prenatally. We present a case detected ultrasonographically that developed from a central line infection and caused recurrent maternal bacteremia.

CASE:

A young woman with a 21-week twin gestation presented with recurrent fevers. She had received treatment for bacteremia due to *Serratia marcescens*. The initial source of the infection was a peripherally inserted central catheter line placed in the first trimester for hyperemesis gravidarum. Fevers continued throughout the second course of antibiotics. An abscess seen sonographically in twin A's placenta was aspirated using a spinal needle, revealing *Serratia* bacteria. Aspiration was performed at 22 weeks of gestation. Amniotic fluid samples obtained from both sacs were negative for infection. Over 4 weeks, the abscess enlarged and she was delivered. Twin A died of sepsis and twin B had a relatively favorable neonatal course.

CONCLUSION:

Prenatal diagnosis of placental abscess presents a difficult management dilemma. Traditional amniotic fluid studies did not predict the poor outcome of the affected fetus.

[J Thorac Cardiovasc Surg](#). 2006 Feb;131(2):427-32. Epub 2006 Jan 18.

Robotically assisted periventricular closure of perimembranous ventricular septal defects: preliminary results in Yucatan pigs.

[Amin Z](#), [Woo R](#), [Danford DA](#), [Froemming SE](#), [Reddy VM](#), [Lof J](#), [Overman D](#).

Source

Joint Division of Pediatric Cardiology, University of Nebraska/Creighton University, Children's Hospital of Omaha, Omaha, Neb 68114 , USA. zamin@chsomaha.org

Abstract

OBJECTIVE:

Robotic systems allow surgeons to perform minimally invasive cardiac surgery in adults. Experience in the pediatric population, however, is limited. Periventricular closure of muscular ventricular septal defects has been reported in humans but requires a median sternotomy. The objective of this study was to assess the feasibility of robotically assisted closure of perimembranous ventricular septal defects by using the periventricular approach.

METHODS:

The procedure was attempted in 7 pigs with naturally occurring perimembranous ventricular septal defects. Echocardiography was performed to confirm the presence and assess the size of the defect. A 3-armed da Vinci system consisting of two 8-mm instrument ports and a 12-mm endoscopy port was used. A pericardiotomy was performed, and the right ventricular free wall was visualized. A spinal needle was advanced into the right ventricular cavity. By using echocardiographic guidance, a glide wire was advanced through the angiocatheter and manipulated through the defect into the left ventricle or the ascending aorta. A delivery sheath

was advanced over the wire. An appropriately sized Amplatzer device was deployed through the sheath.

RESULTS:

The procedure was successful in 5 pigs. One device was removed because it was smaller than the defect and an appropriately sized device was not available. The placement failed in the second pig in the series. Four pigs were followed up for 1 to 4 months. Angiograms performed before the pigs were killed documented complete occlusion in 3 and mild-to-moderate shunt in 1.

CONCLUSIONS:

Robotically assisted periventricular closure with the Amplatzer Membranous VSD Occluder is feasible. This approach avoids the associated morbidities of cardiopulmonary bypass and median sternotomy. Further investigation and refinements are needed, however, before application of this approach in humans.

[Interv Neuroradiol.](#) 2005 Dec 20;11(4):349-54. Epub 2006 Feb 10.

Carotid blowout treated by direct percutaneous puncture of internal carotid artery with temporary balloon occlusion.

[Chang FC](#), [Lirng JF](#), [Luo CB](#), [Teng MM](#), [Guo WY](#), [Chang CY](#).

Source

Department of Radiology, Taipei Veterans General Hospital, National Yang Ming University, School of Medicine; Taipei, Taiwan - fcchang@vghtpe.gov.tw.

Abstract

Summary: Direct percutaneous puncture of a cervical carotid pseudoaneurysm for coil placement or acrylic embolization is described for the endovascular management of acute carotid blowout. However, direct puncture of the internal carotid artery (ICA) for the endovascular management of carotid blowout has not been described. We report a difficult case of acute carotid blowout syndrome in a patient who had radiation-induced occlusion of the right common carotid artery with vasculopathy and pseudoaneurysm in the right cervical ICA. Collaterals from the branches of the contralateral external carotid artery (ECA) anastomosed with branches of right ECA supplied the vasculopathy. We performed direct percutaneous puncture of the bulb of the right ICA using a spinal needle and placed fiber coils to occlude antegrade flow of the artery. During the injection of a mixture of N-butyl cyanoacrylate and lipiodol oil for embolization of the remaining carotid bulb, we transiently inflated an occlusion balloon in the contralateral common carotid artery to further arrest antegrade flow in the ICA. The vasculopathy and pseudoaneurysm of the right cervical ICA were successfully embolized, with preservation of the distal branches of the right ICA.

[J Matern Fetal Neonatal Med.](#) 2005 Oct;18(4):221-4.

Reducing pain with genetic amniocentesis-A randomized trial of subfreezing versus room temperature needles.

[Wax JR](#), [Pinette MG](#), [Carpenter M](#), [Chard R](#), [Blackstone J](#), [Cartin A](#).

Source

Maine Medical Center, Department of Obstetrics and Gynecology, Division of Maternal-Fetal Medicine, Portland, ME 04102, USA. waxj@mmc.org

Abstract

OBJECTIVE:

To determine whether pain associated with second trimester genetic amniocentesis is decreased by using subfreezing rather than room temperature needles.

METHODS:

Subjects were randomized to a -14 degrees C or room temperature (20-22 degrees C) 22-gauge spinal needle. Patients, blinded to allocation, recorded anticipated and actual pain before and after the procedure, respectively, using a 0-10 visual analog scale with 0 = no pain and 10 = excruciating pain.

RESULTS:

Thirty-three subjects were randomized to room temperature and 29 subjects to subfreezing needles. Anticipated pain was similar in room temperature, 5.1 +/- 1.7, and subfreezing groups, 4.9 +/- 2.0, respectively ($p = 0.6$). Actual pain was also similar in the room temperature, 3.6 +/- 2.0, and subfreezing groups, 2.8 +/- 2.0, respectively ($p = 0.14$). Similar numbers of subjects in the room temperature and subfreezing groups reported less actual pain (20 vs. 18), greater actual pain (4 vs. 4) or no difference in pain (9 vs. 5) than anticipated ($p = 0.6$).

CONCLUSION:

A subfreezing 22-gauge spinal needle does not decrease perceived pain associated with second trimester genetic amniocentesis.

[Surg Neurol](#). 2005 Oct;64(4):351-3; discussion 353-4.

Percutaneous computer tomography-guided technique to close postsurgical cerebrospinal fluid fistulas of the frontal sinus.

[Fraiole MF](#), [Contratti F](#), [Fraiole C](#), [Floris R](#).

Source

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Abstract

BACKGROUND:

The occurrence of cerebrospinal fluid fistulas of the frontal sinus after anterior skull base surgery is not rare. The extracerebral techniques to repair cerebrospinal fluid fistulas are often used, especially because they avoid open-air surgical operations.

METHODS:

A percutaneous CT-guided technique to close postsurgical cerebrospinal fluid fistulas of the frontal sinus in three patients after anterior skull base surgery is presented in this report. Ten millimeters of human fibrin glue was injected into the frontal sinus through one of the burr holes of the bone flap by an 18-gauge spinal needle.

RESULTS:

After an average follow-up period of 2.8 years, all three patients are in excellent general and neurological conditions and have not shown any further signs of rhinoliqorrhoea.

CONCLUSIONS:

The presented percutaneous CT-guided technique can be considered a valid and harmless solution to closer small or moderate cerebrospinal fluid fistula that occurred after anterior skull base surgery.

[Arthroscopy](#). 2005 Oct;21(10):1266.

Traumatic articular-bursal fistula in a collegiate football player.

[Diduch DR](#), [Lee GP](#), [Barr M](#).

Source

Department of Orthopaedic Surgery, The University of Virginia Health Systems, Charlottesville, Virginia, USA. drd5c@virginia.edu

Abstract

A collegiate football player suffered a direct blow to the distal quadriceps mechanism, resulting in a partial tear of the vastus medialis obliquus. Over time, he began to develop activity-related swelling of his prepatellar bursa. By 6 weeks after his injury, an area of swelling the size of a golf ball would rapidly develop with just 5 minutes of quadriceps exercises. Swelling would diminish within a few hours of rest. A magnetic resonance imaging examination suggested a fistula track from the articular space through the vastus medialis obliquus into the prepatellar bursal area. When prolonged rest did not improve his symptoms, he was taken to surgery. Arthroscopic visualization confirmed a traumatic fistula between the articular space and the prepatellar bursa, allowing free egress of fluid. A spinal needle was used to localize the fistula tract to allow this to be identified for an open, layered suture closure. An area of traumatic chondrosis on the medial side of the patella with loose chondral flaps was also debrided as the probable "fluid generator." The patient enjoyed a full recovery and was back to playing college football 10 weeks after surgery.

[J Ultrasound Med](#). 2005 Oct;24(10):1341-6.

Detection of metallic ocular foreign bodies with handheld sonography in a porcine model.

[Shiver SA](#), [Lyon M](#), [Blaivas M](#).

Source

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Abstract

OBJECTIVE:

Eye conditions are common in emergency departments. Intraocular foreign bodies (IOFBs) are a frequent concern. Orbital computed tomography (CT) is traditionally used for evaluation. We sought to evaluate bedside ocular sonography for detecting metallic IOFBs.

METHODS:

A pig model was chosen. A micrometer was used to create 3 precise metallic fragments: 0.012 x 0.012 x 0.012, 0.025 x 0.025 x 0.012, and 0.05 x 0.05 x 0.012 in. Individual eyes were

randomized to the presence or absence of a foreign body. Randomization was also used to determine the specific size of any given IOFB. A standard 18-gauge spinal needle was used to puncture the sclera and introduce the IOFB into the vitreous. Each eye was then evaluated by 2 sonologists for the presence or absence of an IOFB.

RESULTS:

A total of 28 eyes were used; 12 (43%) were randomized to no IOFB and 16 (57%) to the presence of an IOFB. Of the 16 eyes that received IOFBs, 8 (50%) were 0.012 x 0.012 x 0.012 in; 5 (31%) were 0.025 x 0.025 x 0.012 in; and 3 (19%) were 0.05 x 0.05 x 0.012 in. Sensitivity was 87.5% and specificity 95.8%. Positive predictive value (PPV) and negative predictive value (NPV) were 96.5% and 85.2%, respectively.

CONCLUSIONS:

Bedside sonography may identify the presence of metallic IOFBs. The PPV allows a high degree of certainty that an IOFB is actually present if seen and may negate the need for uninfused orbital CT. The NPV was 85.2%. Given the potential grave consequences of a missed IOFB, sonography cannot be used as the definitive test to rule out the presence of a metallic IOFB. In the presence of negative findings, further imaging is warranted.

[Acta Obstet Gynecol Scand.](#) 2005 Oct;84(10):1019-20.

Use of spinal needle for transcervical saline infusion sonohysterography in presence of cervical stenosis.

[Pisal N](#), [Sindos M](#), [O'Riordan J](#), [Singer A](#).

Source

Department of Women's Health, Whittington Hospital, London, UK.
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[Arthroscopy.](#) 2005 Aug;21(8):1015.

Suprascapular nerve block for shoulder arthroscopy.

[Barber FA](#).

Source

Plano Orthopedic and Sports Medicine Center, Plano, Texas 75093, USA.

Abstract

The suprascapular nerve (SSN) originates from the C5 and C6 nerve roots and provides sensation for the posterior shoulder capsule, acromioclavicular joint, subacromial bursa, and coracoclavicular ligament. Blocking it provides pre-emptive anesthesia, decreased intraoperative pain, and postoperative pain relief in shoulder arthroscopy. Under general anesthesia, 25 mL of 0.5% bupivacaine is injected by a spinal needle placed 1 cm medial to the convergence of the spine and clavicle, angling toward the coracoid. At a depth of 3 to 4 cm, the needle strikes the scapula body. The surgeon probes with the needle anteriorly until the scapula is no longer felt, then moves the needle back posteriorly until the bone is felt again. This places the needle at the coracoid base in the suprascapular fossa where the SSN curves around the coracoid and heads to the glenohumeral joint. At this point, the anesthetic is injected, "flooding" the SSN location. In addition to the SSN block, other pain-control procedures should be performed, including bupivacaine injection of all portals and an intra-

articular injection of morphine sulfate at the end of the procedure. The SSN block is an effective technique and can reduce postoperative medication needs and allow earlier patient discharge from the surgery center.

[J Med Assoc Thai](#). 2005 Jun;88(6):728-33.

Experience of the first 50 cases of cordocentesis after training with model.

[Tongprasert F](#), [Tongsong T](#), [Wanapirak C](#), [Sirichotiyakul S](#), [Piyamongkol W](#), [Chanprapaph P](#).

Source

Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University, Chiang Mai 50200, Thailand. fpunyath@mail.med.cmu.ac.th

Abstract

OBJECTIVE:

To describe the experience of the first 50 cases of cordocentesis after practicing with cordocentesis model.

MATERIAL AND METHOD:

Cordocentesis model consisted of a water-filled transparent glass box covered with a rubber latex sheet with or without piece of pork skin. A 30-cm umbilical cord filled with mercurochrome, hung inside the container, was the target for the puncture. As in real practice, the trainee had to try to aspirate the red mercurochrome from the umbilical cord using a spinal needle under ultrasonographic guidance. After practicing with the model for 300 procedures, the trainee was allowed to perform cordocentesis on pregnant women at gestational age of 18-22 weeks by herself under expert supervision with time limit of 30 minutes. The procedure not successful in 30 minutes was considered failure. Duration of procedures, placental site, puncture site, and related complications were recorded for subsequent analysis.

RESULTS:

After practicing with model for 300 procedures, real cordocentesis was performed by the trainee on 50 pregnant women. The success rate in obtaining fetal blood within 30 minutes was 100%. Most of them (92%) took less than 10 minutes to complete the procedure. Puncture site bleeding and fetal bradycardia were the most common immediate complications, found in 30% and 8% respectively, and spontaneously resolved within few minutes.

CONCLUSION:

Without any fetal and maternal jeopardy, cordocentesis model is simple, inexpensive but highly effective for the beginner to gain their experience, skill and prepare themselves for cordocentesis with confidence. However, the reduction of fetal loss rate with the training program remains to be further tested.

[Arthroscopy](#). 2005 Jun;21(6):768.

New meniscus repair by an all-inside knot suture technique.

[Fukushima K](#), [Okano T](#), [Negishi S](#), [Horaguchi T](#), [Sato K](#), [Saito A](#), [Ryu J](#).

Source

Verdy Clinic, Orthopaedic Surgery and Sports Medicine, Nihon University, Tokyo, Japan.
kazufuku@verdy.co.jp

Abstract

The indications for the all-inside knot suture technique include tears in the red-red zone or red-white zone in the meniscus, and a horizontal tear, a vertical tear, and a peripheral tear. First, find an appropriate place for a suture insertion site with a Kateran needle or a spinal needle. Make sure it exits beyond the tear in the meniscus. Once the insertion site is chosen, a suture is passed into and through the joint. The suture is slowly pulled back. You should be able to feel the tip of the suture come out of the joint capsule. If you want to make a vertical suture to suture the tear, move the suture vertically apex. Then insert the suture back into the joint through the capsule. Make sure the suture stays inside the joint. Find and grab the suture with a punch inserted from the clear cannula. Pull the suture out of the joint through the clear cannula with the punch. Tighten the knot with a knot pusher. Then confirm the stability of the sutured site with the probe. Our all-inside knot suture technique can be performed arthroscopically, allowing reliable repair of the torn meniscus.

[Radiol Med.](#) 2005 Apr;109(4):421-9.

Sacral-neuromodulation CT-guided.

[Article in English, Italian]

[Amoroso L](#), [Pelliccioni G](#), [Ghiselli R](#), [Scarpino O](#), [Saba V](#), [Ricci S](#).

Source

Dipartimento di Radiologia e Medicina Nucleare, Ancona, Italy. l.amoroso@inrca.it

Abstract

PURPOSE:

Sacral neuromodulation is a new treatment for refractory voiding disorders such as urge incontinence, urinary retention, frequency-urgency syndromes and faecal incontinence. The current approach to sacral nerve stimulation consists of a two-stage procedure. The first is a PNE test (Percutaneous Nerve Evaluation) by a provisional electrically stimulated spinal needle, placed percutaneously in the S3 foramina for four to ten days. If successful, the second stage, permanent implantation, is carried out. The PNE test is performed under fluoroscopic control using the palpable bony sacral foramina as referral points. This technique can show some limitations, such as operator Rx exposure, poor visualization of sacral foramina because of bowel gas artefacts or sacral malformation. In order to reduce these inconveniences and to improve efficiency of the test we tried an alternative technique. The purpose of our study was to test the use of CT as an alternative technique in order to evaluate its advantages and possible routine use.

MATERIALS AND METHODS:

We tested 30 patients with the PNE test under CT guidance (16 males and 14 females) suffering from serious pelvic disorders and not responding to the normal therapeutic regime. Twenty-seven patients showed relative anatomical integrity of the pelvis and the sacrum, the remaining 3 patients presented morphological anomalies of the sacral foramina. With the patient in the prone position the sacral foramina were identified with CT volumetric scanning using a spiral CT scanner equipped with a second console for the three-dimensional reconstructions. Having identified the location of the S3 foramina, a sterile field was prepared and the spinal needle introduced checking correct positioning with a CT control scan. An

electrode was then inserted after having checked correct muscular contractile response and the precise position with a further CT scan.

RESULTS:

Thirty patients were subjected to PNE under CT guidance for a total of 38 centerings. Eight patients underwent the PNE procedure on both the S3 foramina. The sacral foramen was centred at the first attempt in 36 out of 38 cases. Two cases required several attempts to centre correctly the foramen. In 4 patients out of 30 a second electrode was implanted. In one patient who had a nonconsolidated sacral fracture, CT guidance enabled insertion of the electrode inside the only practicable foramen, a manoeuvre that would have been impossible with fluoroscopical guidance. Only once was the electrode placed in a wrong location but promptly repositioned after a CT control. During the whole trial period we had a positive response to the PNE test in 18 out of 30 patients (60%), a partial response in 4 out of 30 patients and a negative response in the remaining 8 patients. None of the patients who underwent the PNE test had infectious complications and the procedure was well tolerated by all. The procedure lasted about 45 minutes.

[Arthroscopy](#). 2005 Jan;21(1):77-80.

Accuracy of anterior intra-articular injection of the glenohumeral joint.

[Sethi PM](#), [Kingston S](#), [Elattrache N](#).

Source

Orthopedic and Neurosurgical Specialists, Greenwich, Connecticut 06830, USA.
paulsethi@pol.net

Abstract

PURPOSE:

Intra-articular glenohumeral injections are an important part of orthopaedic practices, and the therapeutic benefit and diagnostic information of certain injections is based on the premise of the injection reaching its desired target. This study assessed the accuracy of an anterior intra-articular injection in awake subjects without radiologic assistance.

TYPE OF STUDY:

Case control study.

METHODS:

Forty-one patients scheduled for magnetic resonance imaging arthrography underwent anterior placement of a spinal needle using a location just lateral to the coracoid as the anterior landmark for injection, without radiographic assistance. After the needle was placed and clinically estimated to be intra-articular, 1 mL of gadolinium was injected into the joint to determine accuracy of position. The presence of intra-articular contrast was judged as an accurate injection. Results: Only 26.8% (11 of 41) of injections placed anteriorly were actually intra-articular. The remaining were extra-articular, the most common location of error being either too medial or too superficial in the deltoid muscle.

CONCLUSIONS:

Based on our cadaveric study, we believed that an unassisted anterior injection to the glenohumeral joint would be accurately placed. However, this study shows that without some form of radiologic guidance, it is unlikely that an anteriorly placed intra-articular glenohumeral injection will be accurately placed in awake patients, and we do not recommend this technique.

LEVEL OF EVIDENCE:

Level IV.

[Dis Colon Rectum](#). 2004 Nov;47(11):1767-72.

Comparative analysis of nodal upstaging between colon and rectal cancers by sentinel lymph node mapping: a prospective trial.

[Saha S](#), [Monson KM](#), [Bilchik A](#), [Beutler T](#), [Dan AG](#), [Schochet E](#), [Wiese D](#), [Kaushal S](#), [Ganatra B](#), [Desai D](#).

Source

Department of Surgery, Michigan State University, East Lansing, Michigan, USA.

Abstract

PURPOSE:

Sentinel lymph node mapping accurately predicts nodal status in > 90 percent of melanoma and breast and colorectal cancers. However, because of anatomic differences, sentinel lymph node mapping of rectal cancers has been considered inaccurate and difficult relative to colon. A prospective study was undertaken to identify differences in sentinel lymph node mapping between patients with colon cancer and those with rectal cancer.

METHODS:

At operation 1 to 3 ml of 1 percent isosulfan blue dye was injected subserosally around colon cancers. The first to fourth blue-staining nodes seen within ten minutes of injection were marked as sentinel lymph nodes. For cancer of the mid-rectum to low rectum, the dye was injected submucosally via rigid scope and spinal needle. The mesorectum was dissected ex vivo to identify blue nodes nearest the tumor as sentinel lymph nodes. Multilevel microsections of sentinel lymph nodes were stained with hematoxylin and eosin and immunostained for cytokeratin, and standard examination of the entire specimen was performed.

RESULTS:

There were 407 consecutive patients (336 with colon and 71 rectum). The sentinel lymph nodes were identified in 99.1 percent of colon and 91.5 percent of rectal patients ($P < 0.0001$). Skip metastases were found in 3.6 percent of colon vs. 2.8 percent of rectal patients ($P = 0.16$). Occult micrometastases were found in 13.4 percent of colon vs. 7.0 percent of rectal patients ($P = 0.24$). Except for success rates, no other parameters were statistically different between colon and rectum. Lower success in sentinel lymph node identification in rectal cancer may have been related to neoadjuvant chemoradiation received in all six of the patients with sentinel lymph node mapping failures.

CONCLUSION:

Despite higher success rates in sentinel lymph node identification for colon patients, sentinel lymph node mapping was highly successful (91.5 percent) in rectal patients. Nodal upstaging, skip metastases, and occult metastases were similar.

[Aesthetic Plast Surg](#). 2004 May-Jun;28(3):170-3. Epub 2004 Aug 3.

Caveats for the use of suspension sutures.

[Hudson DA](#), [Fernandes DB](#).

Source

Department of Plastic and Reconstructive Surgery, Groote Schuur Hospital, H51 OMB, Observatory, Cape Town, 7925, South Africa. hudson@uctgsh1.uct.ac.za

Abstract

Suspension sutures may be considered a method for elevating ptotic tissue. This method often uses a limited access incision, and commonly is used in cosmetic surgery. The caveats for the technique are not well described. This article describes eight caveats for successful suture suspension. A method for performing this procedure with a spinal needle is described, using the lateral eyebrow as an example.

[Urology](#). 2004 Sep;64(3):528-31.

Unilateral pudendal nerve blockade for relief of all pain during transrectal ultrasound-guided biopsy of the prostate: a randomized, double-blind, placebo-controlled study.

[Adsan O](#), [Inal G](#), [Ozdoğan L](#), [Kaygisiz O](#), [Uğurlu O](#), [Cetinkaya M](#).

Source

Department of Urology, Ankara Numune Education and Research Hospital, Ankara, Turkey.

Abstract

OBJECTIVES:

To investigate the efficacy of unilateral pudendal nerve block for the relief of all pain during transrectal ultrasound (TRUS)-guided prostate biopsy. TRUS-guided prostate biopsy is the standard procedure to diagnose or rule out prostate cancer. The pain, attributed to ultrasound probe insertion and the needle punctures into the prostate, inflicted by TRUS-guided prostate biopsy limits its effectiveness.

METHODS:

We performed a prospective, randomized, double-blind, placebo-controlled study of 65 consecutive men suspected of having prostate cancer who were undergoing TRUS-guided prostate biopsy, 51 of whom fulfilled the inclusion criteria. Before the biopsy, each patient was randomized to one of two groups. Both the patient and the physician who performed the TRUS-guided biopsy were unaware of the contents of the injection for the pudendal nerve block. Unilateral pudendal nerve blockade was performed transperineally with digital rectal examination guidance using 10 mg of 1% prilocaine (group 1 [n = 26]) or 10 mL of a 0.9 NaCl solution (group 2 [n = 25]) by way of a 22-gaugespinal needle by the same anesthetist. Pain was evaluated using an 11-point visual analog scale questionnaire.

RESULTS:

No statistically significant differences were found in the visual analog scale score for pain during the pudendal nerve blockade or digital rectal examination between the groups. A statistically significant difference was found in the visual analog scale score for the biopsy procedure ($P < 0.01$) and probe discomfort ($P < 0.05$) between the two groups.

CONCLUSIONS:

Unilateral pudendal nerve blockade was effective in reducing the pain at both biopsy and probe manipulation in our study.

[Endocr Pract.](#) 2004 May-Jun;10(3):276-83.

Ultrasound-guided laser thermal ablation for treatment of benign thyroid nodules.

[Papini E](#), [Guiglielmi R](#), [Bizzarri G](#), [Pacella CM](#).

Source

Department of Endocrine, Metabolic and Digestive Diseases, Ospedale Regina Apostolorum, Albano, Roma, Italy.

Abstract

OBJECTIVE:

To evaluate the efficacy of ultrasound (US)-guided laser thermal ablation (LTA) in reducing the volume of hypofunctioning benign thyroid lesions.

METHODS:

The criteria for entry into the study were as follows: (1) presence of a hypofunctioning thyroid nodule with a volume exceeding 8 mL, (2) benign cytologic findings, (3) local compression symptoms or patient concern, and (4) refusal of or ineligibility for surgical treatment. Twenty patients (15 women and 5 men; mean age, 63.3 +/- 14.1 years) fulfilling the entry criteria were enrolled in the study. Under US monitoring, a 75-mm, 21-gauge spinal needle was inserted into the thyroid gland, and a flat-tipped 300-microm quartz fiberoptic guide was placed through the needle into the tissues. LTA was performed with use of a 1.064-microm continuous-wave neodymium yttrium-aluminum-garnet laser that had an output power of 3 W for 10 minutes. US scans were used to assess the decrease in nodule volume at 1 month and 6 months after LTA.

RESULTS:

After LTA, mean nodule volume decreased from a baseline value of 24.1 +/- 15.0 mL to 13.3 +/- 7.7 mL at 1 month and to 9.6 +/- 6.6 mL at 6 months. Mean nodule volume reduction in comparison with baseline was 43.8 +/- 8.1% at 1 month and 63.8 +/- 8.9% at 6 months. LTA induced burning cervical pain, which rapidly decreased after the laser energy was turned off. Three patients (15%) required treatment with betamethasone for 48 hours. No patient had local bruising, cutaneous burning, or dysphonia.

CONCLUSION:

LTA may be an effective procedure for the treatment of benign cold thyroid nodules that cause pressure symptoms in patients who are not candidates for surgical treatment or who refuse to undergo a surgical procedure.

[Ceska Gynekol.](#) 2004 May;69(3):182-6.

[Exchange amniocentesis in conceptus with laparoschisis (first experience)].

[Article in Slovak]

[Turkota L](#), [Hinst J](#), [Rusnák I](#), [Cunderlík A](#), [Slezák I](#), [Feitscher P](#), [Stencel J](#), [Horn E](#), [Babala J](#), [Siman J](#).

Source

Gynekologicko-pôrodnická klinika SZU, FNŠP akad. L. Déreza, Bratislava, Slovenské Republiky.

Abstract

OBJECTIVE:

During amnioinfusion exchange (AE) a certain amount of amniotic fluid is repeatedly extracted and the same amount of physiological solution is consequently instilled into the amniotic fetal cavity. The aim of this procedure is to dilute the amniotic fluid that surrounds the eviscerated organs of fetuses with laparoschisis so as to avoid the genesis of fibrous coating on these organs.

DESIGN:

Prospective study.

SETTING:

Gynekologicko-pôrodnická klinika SZU, FNŠP akad. L. Dérera, Bratislava, Slovakia.

METHODS:

We have executed AE in five fetuses with laparoschisis since June 2002. Two patients underwent the treatment 2 times during the 32nd and 36th weeks of gestation. Two other patients were treated once during the 32nd week and one patient once during the 36th week. Under ultrasound control we used a spinal needle to extract 120-180 ml of dense, cloudy amniotic fluid. Consequently, we instilled the same amount of physiological solution warmed up to the temperature of 37 degrees C into the amniotic cavity through antibacterial filter. The fetuses were monitored cardiotocographically and with the help of ultrasound flowmetry in umbilical vessels, before and after the treatment.

RESULTS:

The AE were successful and without complications in all five cases. All patients delivered via elective caesarean section during the 36th - 37th gestation week. One patient delivered 24 hours after second AE due to the danger of intrauterine fetal hypoxia that was verified cardiotocographically. The other patients delivered 1-4 weeks after AE.

CONCLUSION:

The significance of AE lies primarily in the reduction of the occurrence of fibrous coating on eviscerated organs. It enables postnatal primary surgical closure of the defect in the front abdominal wall, an earlier onset of intestine peristalsis, transition from parenteral to peroral nutrition and shorter hospitalization.

[Fetal Diagn Ther.](#) 2004 Sep-Oct;19(5):448-52.

Intrafetal alcohol chemosclerosis of acardiac twins: a multicenter experience.

[Sepulveda W](#), [Corral E](#), [Aiello H](#), [Otaño L](#), [Paredes R](#), [Escobar MF](#), [Heredia E](#), [Quiroz V](#).

Source

Fetal Medicine Center, Clinica Las Condes, Santiago, Chile. waldosep@hotmail.com

Abstract

OBJECTIVE:

To report a multicenter experience with intrafetal alcohol chemosclerosis in the treatment of pregnancies complicated with the twin reversed arterial perfusion sequence.

METHODS:

Percutaneous injection of 1- 2 ml of absolute alcohol into the intra-abdominal segment of the single umbilical artery was performed in 8 acardiac twins. Cases were collected from 5 centers following a standardized protocol. The procedure was performed under continuous

ultrasound control, using color Doppler ultrasound to identify the main arterial vessel entering the abdomen of the acardiac twin and passing a 20-gauge spinal needle into the targeted vessel. Intraoperative and short-term complications were noted. Information on pregnancy outcome was obtained by reviewing the medical records or contacting the referring obstetrician.

RESULT:

At the time of the procedure, the acardiac twin was severely hydropic and the size exceeded 70% of the size of the pump twin in all cases. In addition, there were associated complications in all the pump twins including polyhydramnios in 8 cases (100%), cardiac insufficiency in 5 (63%), and fetal growth restriction in 1 (13%). The procedure was performed at a mean gestational age of 24.7 weeks (range 20-32), and it was technically successful in all cases. However, it was complicated with thrombosis of the umbilical vessels of the pump twin in 1 case, and transient bradycardia in 2 others. These 3 pump twins died in utero as a result of the procedure. The other 5 procedures were technically and clinically successful, resulting in an overall survival rate of 63%. In 4 pregnancies, the pump twin was delivered after 35 weeks and had no neonatal complications.

CONCLUSIONS:

Intrafetal alcohol chemosclerosis is a simple procedure that can be performed in any fetal medicine center around the world to stop the vascular supply to acardiac twins. However, the main concern with this technique is intravascular transfer of the ablative material to the circulation of the pump twin. The use of this technique should therefore be restricted to those pregnancies with poor prognostic factors and in countries where more sophisticated methods for the treatment of this condition are not available.

[Arthroscopy](#). 2004 Jul;20(6):596-602.

Glenohumeral arthroscopy portals established using an outside-in technique: neurovascular anatomy at risk.

[Lo IK](#), [Lind CC](#), [Burkhart SS](#).

Source

The San Antonio Orthopaedic Group, San Antonio, Texas, USA.

Abstract

PURPOSE:

The purpose of this study was to examine the neurovascular structures at risk during placement of glenohumeral arthroscopy portals using an outside-in technique.

TYPE OF STUDY:

Anatomic cadaveric study.

METHODS:

Five fresh-frozen cadaveric specimens were used in this study. Each shoulder was mounted on a custom-designed apparatus allowing shoulder arthroscopy in a lateral decubitus position. The following portals were established using an outside-in technique and marked using an 18-gauge spinal needle: posterior, posterolateral, anterior, 5-o'clock, anterosuperolateral, and Port of Wilmington. Each specimen was carefully dissected after the procedure, and the distance from each portal site to the adjacent relevant neurovascular structures (axillary nerve, musculocutaneous nerve, lateral cord of the brachial plexus, cephalic vein, and axillary artery) was measured using a precision caliper.

RESULTS:

Except for the cephalic vein, all of the neurovascular structures were more than 20 mm away from all the portals evaluated. When creating either an anterior portal or a 5-o'clock position portal, the mean distance from the portal to the cephalic vein was 18.8 mm and 9.8 mm, respectively. In one anterior portal, a direct injury to the cephalic vein occurred.

CONCLUSIONS:

Our study suggests that shoulder arthroscopy portals placed in an outside-in fashion are unlikely to produce neurologic injury. However, the cephalic vein is at risk during placement of an anterior or 5-o'clock position portal, although probably with minimal subsequent patient morbidity. Placing portals in an outside-in fashion guarantees the correct angle of approach, with minimal risk to adjacent neurologic structures.

CLINICAL RELEVANCE:

This study shows the safety of standard and accessory glenohumeral arthroscopy portals.

[Arch Gynecol Obstet.](#) 2004 Jul;270(1):61-3. Epub 2003 Jan 8.

Treatment of a cervical viable pregnancy with a single intraamniotic methotrexate injection: a case report.

[Yazici G](#), [Aban M](#), [Arslan M](#), [Pata O](#), [Oz U](#).

Source

Department of Obstetrics and Gynecology, Faculty of Medicine, Mersin, Turkey.

Abstract

INTRODUCTION:

Cervical pregnancy is a rare condition, constituting <1% of all ectopic pregnancies.

CASE REPORT:

We report here, the successful management of a viable 7 weeks gestation cervical pregnancy. Feticide with 2 ml of potassium chloride 15% was performed under the guidance of transvaginal ultrasonography. Then 70 mg methotrexate (50 mg/m²) was injected through this spinal needle in to the amniotic cavity. Also serial changes in the color Doppler imaging after the methotrexate injection were emphasized.

[Eur J Pediatr Surg.](#) 2004 Apr;14(2):100-2.

Injection sclerotherapy of rectal prolapse in children with 15 percent saline solution.

[Abeş M](#), [Sarihan H](#).

Source

Department of Pediatric Surgery, Karadeniz Technical University, Faculty of Medicine, Trabzon, Turkey. yaren-52@ttnet.net.tr

Abstract

PURPOSE:

A wide variety of sclerosing agents have been used in the treatment of rectal prolapse (RP) in children. We have used 15 % saline solution for the first time in the treatment. The aim of this study is to review the results of a 15 % saline solution and other sclerosing agents.

PATIENTS AND METHODS:

A total of 16 children with RP were treated by injection of 15 % saline solution. Under general anesthesia, the patient was placed in the lithotomy position. The left index finger was inserted into the rectum to control the position of the needle, a 20-gauge spinal needle was introduced through the perianal skin and was advanced. The saline was slowly injected, the needle was then withdrawn slightly, and the injection was continued until 2 - 3 ml of 15 % saline were injected. The injection was made into the submucosal tissue, the right perirectal area, the left perirectal area, and posterior to the rectum at 5 points.

RESULTS:

Conservative treatment had previously failed in all patients. Prolapse ceased in 15 (93.7 %) of the 16 children after the first injection. Only one patient required a second injection. There were no complications.

CONCLUSIONS:

The success rates and complications of the treatment reported in the literature differ for each sclerosing agent. 15 % saline is preferable because of the high cure rate, the safety of the procedure, the easy injection, and the lack of complications.

[Brachytherapy](#). 2002;1(3):145-8.

Prostate brachytherapy under local anesthesia; lessons from the first 600 patients.

[Wallner K.](#)

Source

Radiation Oncology, Puget Sound Health Care System, Department of Veterans Affairs, Seattle, WA, USA. kent.wallner@med.va.gov

Abstract**PURPOSE:**

Local anesthesia for prostate brachytherapy was instituted at the Puget Sound Veterans Hospital in 1999, performing the procedure in our own department without anesthesia personnel in attendance.

MATERIALS AND METHODS:

The patient is brought into the simulator suite in the radiation oncology department, an i.v. line is started, a cardiac monitor attached, and a urinary catheter is inserted. He is then placed in the lithotomy position, using stirrups attached to the simulator table. A 6-8 cm patch of perineal skin and subcutaneous tissue is anesthetized by local infiltration of 1% lidocaine. The transrectal ultrasound (TRUS) probe is then inserted and positioned to reproduce the planning images. A 3.0 inch 22-gauge spinal needle is used to inject lidocaine up to the prostatic apex, in a pattern around the periphery of the prostate. Once the pelvic floor and prostatic apex are anesthetized, a 7.0-inch, 22-gauge spinal needle is inserted through an 18-gauge 3 inch spinal needle into the peripheral planned needle tracks, monitored by TRUS. As the needles are advanced to the prostatic base, about 1.0 cc of lidocaine solution is injected in the intraprostatic track. A total of 200 to 500 mg of lidocaine is used.

RESULTS:

As of December 2000, more than 600 patients have received implants under local anesthesia at Seattle, WA. Patients tolerate brachytherapy under local anesthesia surprisingly well. Post-implant CT-defined target coverage has ranged from 80% to 95%, well within published criteria for technical adequacy. Patients' typical implant pain score is 3, on a scale of 0-10.

After a series of patient acceptance quality studies, we have abandoned the routine use of sedation, and relied instead on local lidocaine infiltration alone.

CONCLUSION:

In addition to a high degree of patient satisfaction, performing implants under local anesthesia allows for phenomenal logistical efficiencies and cost advantages.

[Diagn Cytopathol.](#) 2004 Apr;30(4):247-50.

Metastatic malignant melanoma in liver aspirate: cytomorphologic distinction from hepatocellular carcinoma.

[Parwani AV](#), [Chan TY](#), [Mathew S](#), [Ali SZ](#).

Source

Department of Pathology, The Johns Hopkins Hospital, Baltimore, Maryland 21287-6940, USA.

Abstract

Hepatic metastases of malignant melanoma are not unusual and frequently occur with a clinically long latent period following resection of a cutaneous or ocular primary. Due to its overlapping cytomorphology with a primary hepatocellular carcinoma, diagnostic difficulties may arise on fine-needle aspiration of these lesions if the clinical history of melanoma is not known. Thirty-two cases of metastatic melanoma in the liver and primary hepatocellular carcinoma were studied. Aspiration was performed under ultrasound guidance using 22-gauge spinal needle. Slides were stained with Diff-Quik and Papanicolaou stain; cell blocks were stained with H&E. A panel of immunostains was performed using conventional methodology. Of the 12 cytologic parameters assessed, the most helpful in making a metastatic melanoma diagnosis were the presence of sheet-like architecture, plasmacytoid and/or biphasic (epithelioid/spindled cell) morphology, cytoplasmic tails, necrosis, and cytoplasmic melanin-like pigment. For hepatocellular carcinoma, the presence of trabeculae, perivascular cellular clustering, endothelial wrapping, and centrally located nuclei with granular cytoplasm were helpful features. In selected cases, IPOX studies were critical in arriving at the correct diagnosis.

[AJR Am J Roentgenol.](#) 2003 Dec;181(6):1685-90.

Metallic marker placement after stereotactic core biopsy of breast calcifications: comparison of two clips and deployment techniques.

[Margolin FR](#), [Kaufman L](#), [Denny SR](#), [Jacobs RP](#), [Schrumph JD](#).

Source

Breast Health Center, California Pacific Medical Center, 3698 California St., San Francisco, CA 94118, USA.

Abstract

OBJECTIVE:

Two methods of deployment of metallic clips at the site of stereotactic core biopsy for breast calcifications are compared retrospectively.

MATERIALS AND METHODS:

One hundred nineteen clips deployed through an 11-gauge vacuum-assisted biopsy probe at core biopsy sites were compared with 109 vascular ligating clips deployed at biopsy sites using an 18-gauge spinal needle. The distance of each clip from the position of the target calcification was assessed using stereotactic coordinates in 52 sequential cases and was measured on mammograms before and after biopsy in 108 clips deployed through an 11-gauge probe and 98 clips deployed using an 18-gauge needle. Variance in clip position between postbiopsy and follow-up mammograms was measured in 43 clips placed with an 11-gauge probe and in 44 clips placed with an 18-gauge needle. Comparable measurements of variance in position of fat necrosis calcifications between screening mammograms were used as controls.

RESULTS:

Ninety-seven percent of the clips placed with an 11-gauge probe and 98% of the clips placed using an 18-gauge needle were within 1 cm of the target calcifications using stereotactic coordinates. On mammograms obtained after biopsy, 70% of the clips placed with an 11-gauge probe and 63% of the clips placed using an 18-gauge needle were within 1 cm of the target calcifications, and the position of 91% of the clips placed with an 11-gauge probe and 90% of the clips placed using an 18-gauge needle varied less than 15 mm on follow-up mammograms. Both clips provided accurate targets for wire-localized excisions. The cost of the 11-gauge needle and clip is \$320. The 14-gauge probe, vascular clip, and 18-gauge spinal needle cost \$191.58.

CONCLUSION:

A vascular ligating clip delivered to a stereotactic core biopsy site by an 18-gauge spinal needle is comparable in apparent accuracy and stability to a clip deployed through an 11-gauge probe. This technique allows core biopsies to be performed with instruments smaller than 11-gauge and at a 40% savings in equipment cost.

[Radiother Oncol.](#) 2003 Jun;67(3):309-12.

A reappraisal of local anesthesia for prostate brachytherapy.

[Mueller A](#), [Wallner K](#), [Corriveau J](#), [Arthurs S](#), [Gwinn M](#), [Sutlief S](#).

Source

Radiation Oncology, Puget Sound Health Care System, Department of Veterans Affairs, Seattle, WA 98108-1597, USA.

Abstract

PURPOSE:

Faced with rapidly increasing patient numbers, the authors adopted and modified a technique to perform prostate implants under local anesthesia in a radiation oncology facility. Our reasons for assembling the current report detailing 20 consecutive, unselected patients are to show how patients tolerate brachytherapy without the use of sedatives, to provide more technical detail regarding the procedure's practical aspects, and to summarize the time needed to complete its components.

MATERIALS AND METHODS:

No pre-operative medication is given. The patient is placed in the lithotomy position, using stirrups mounted on the end of the simulator table. A 5-cm x 5-cm patch of perineal skin and

subcutaneous tissue is anesthetized by local infiltration of 3-5 cm³ of 0.5% lidocaine, using a 25-gauge 1.5-inch needle. Immediately following injection into the subcutaneous tissues, the deeper tissues, of the pelvic floor are anesthetized by injecting 5 cm³ lidocaine solution with approximately 16 passes of a 25-gauge 1.5-inch needle entering perpendicular to the skin surface. The transrectal ultrasound (TRUS) probe of a Siemens SONOLINE Prima ultrasound machine (6.0 MHz) and a Winston-Barzell stepper unit is next positioned to reproduce the planning images and a 3.5-inch, 22-gauge spinal needle is inserted into the peripheral and a few central tracks. About 0.5 cm³ of lidocaine solution is injected into each intraprostatic track, as the needle is slowly advanced. Finally, a 7-inch 22-gauge spinal needle inserted through the skin via a 3.5-inch 18-gauge needle, is used to anesthetize to the base of the prostate under TRUS and fluoroscopic guidance. Seed placement is done with a Mick Applicator, inserting and loading one needle at a time. The number of seeds placed ranged from 60 to 118 (average: 87) and the number of needles used ranged from 14 to 20 (average: 18). For the purpose of this study, prior to walking to the simulator suite, patients were asked to rate the pain they experienced with their prostate biopsy on a scale of 0-10 (no pain to pain at its worst). They were asked to rate their pain at the time of the catheter insertion, the lidocaine infiltration of the perineum and prostate and again at the completion of the seed insertion.

RESULTS:

The amount of lidocaine administered ranged from 250 to 450 mg, with a median of 300 mg. There were no untoward effects of lidocaine. Average pain scores for patients' biopsy, catheter insertion, lidocaine infiltration and seed insertion were 3.3, 3.0, 4.0 and 2.7, respectively. Patients' total time in the simulator room, including taking post-implant dosimetric films, remove the intravenous line and catheter, and to clean the perineum, ranged from 77 to 135 min, with a median of 105 min. The median post-implant CT-defined target coverage by the prescription isodose was 94%, with a range of 80-100%.

CONCLUSIONS:

Performing prostate brachytherapy under local anesthesia, as reported here, is simple, efficient and well tolerated.

[Arthroscopy](#). 2003 Jul-Aug;19(6):E28-31.

Indirect arthroscopic rotator interval repair.

[Cole BJ](#), [Mazzocca AD](#), [Meneghini RM](#).

Source

Department of Orthopaedic Surgery, Rush Medical College, Rush-Presbyterian St. Luke's Medical Center, Chicago, Illinois 60612, USA. bcole@ortho4.pro.rpslmc.edu

Abstract

Repair of the capsular rotator interval has become a successful adjunct to arthroscopic procedures that address glenohumeral instability. This technical note presents a procedure that allows imbrication of the rotator interval in an indirect fashion regardless of pre-existing arthroscopic portals. A monofilament suture is passed percutaneously using a No.18-gauge spinal needle through the inferior portion of the rotator interval capsule. A soft tissue penetrator is passed through the anterior superior portal to retrieve the suture through the superior portion of the rotator interval capsule. A braided suture is then shuttled in the standard fashion. An arthroscopic knot pusher is placed on the inferior limb of the suture and drives this limb below the deltoid and anterior to the capsule to join the second limb for extracapsular fixation. The technique also provides for direct arthroscopic visualization of the

repair and does not necessitate entry into the subacromial space. This is a reproducible procedure that allows efficient repair of the rotator interval.

[Acta Radiol.](#) 2003 Jul;44(4):387-91.

Comparison of stereotactic fine needle aspiration cytology and core needle biopsy in 522 non-palpable breast lesions.

[Leifland K](#), [Lagerstedt U](#), [Svane G](#).

Source

Department of Radiology, St. Göran Hospital Inc., Stockholm, Sweden.
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Abstract

PURPOSE:

To compare the accuracy of stereotactic fine needle aspiration cytologies (S-FNAC) and stereotactic core needle biopsies (S-CNB) in non-palpable breast lesions.

MATERIAL AND METHODS:

Between May 1993 and December 2000, 696 patients with mammographically detected lesions were biopsied both with S-FNAC and S-CNB. S-FNAC was performed with spinal needle 22- or 20-gauge and S-CNB with an automated 14-gauge gun.

RESULTS:

Of the 696 patients, 522 (75%) underwent breast surgery with postoperative histopathology. In all, 448 of these 522 women (86%) had malignant and 74 (14%) had benign lesions. S-FNAC revealed cancer in 254 (57%) and probable cancer in 48 (11%) (sensitivity 68%, specificity 99.6%) and S-CNB revealed cancer in 388 (87%) and probable cancer in 18 (4%) (sensitivity 90%, specificity 98.8%) of these 448 patients.

CONCLUSION:

S-CNB was more accurate than S-FNAC in the diagnosis of non-palpable breast cancer.

[Med Clin \(Barc\).](#) 2003 Jun 14;121(2):53-7.

[Usefulness of sonographically guided thrombin injection of iatrogenic femoral pseudoaneurysms].

[Article in Spanish]

[Vázquez V](#), [Reus M](#), [Morales MD](#), [Abellán J](#), [Piñero A](#), [Soria F](#), [Parrilla P](#).

Source

Servicio de Radiología. Hospital Universitario Virgen de la Arrixaca. Murcia. Spain.

Abstract

BACKGROUND AND OBJECTIVE:

In december 2000, we began to treat iatrogenic femoral pseudoaneurysms with direct thrombin injection under sonographic guidance after failed sonographically guided compression repair. Our purpose was to determine the success and complications rate of this technique.

PATIENTS AND METHOD:

We treated 50 patients who had iatrogenic femoral pseudoaneurysms using direct thrombin injection. A 22-gauge spinal needle was placed into the pseudoaneurysm lumen with sonographic guidance, and bovine thrombin (mean dose, 1200 units; range 200-7000 units) was injected under continuous color Doppler sonographic visualization. Patient demographics, clinical variables, and pseudoaneurysms characteristics were collected.

RESULTS:

The overall success rate was 98% (49/50). 30 patients only required one thrombin injection, with mean thrombosis time of 4 s. When more than one injection was required the mean thrombosis time increased to 9,5 s. There was correlation between thrombosis time and the pseudoaneurysm size ($p < 0.005$); and between pseudoaneurysm size and the dose of thrombin used. No major sedation was needed and no recurrent pseudoaneurysms were observed. With the exception of a mild local erythema in one patient no complications were found.

CONCLUSION:

The thrombin injection under sonographic guidance is a quick, effective and secure method of therapy for the treatment of iatrogenic femoral pseudoaneurysms. Failures and complications are infrequent. At our hospital sonographically guided thrombin injection had replaced compression repair.

[Neurosurg Rev.](#) 2003 Oct;26(4):266-8. Epub 2003 Jun 11.

Intraventricular administration of recombinant tissue plasminogen activator for intraventricular hemorrhage in the newborn.

[Akisu M](#), [Yalaz M](#), [Arslanoglu S](#), [Kultursay N](#).

Source

Department of Pediatrics, Ege University Medical Faculty, 35100 Bornova, Izmir, Turkey.
makisu@med.ege.edu.tr

Abstract

Intraventricular hemorrhage remains associated with high mortality and morbidity. Its most serious complication is posthemorrhagic hydrocephalus caused by multiple small blood clots obstructing the arachnoid villi. We treated three newborn infants (one term, two preterm) with posthemorrhagic hydrocephalus using recombinant tissue plasminogen activator, a thrombolytic agent, injected into the ventricles with a spinal needle. Sufficient fibrinolysis was achieved in these preterm patients. They all survived, and shunt surgery was only required in one. No adverse reactions or side effects have occurred. Intraventricular fibrinolysis with tissue plasminogen activator seems to be safe and effective for the treatment of intraventricular hemorrhage. However, controlled studies are needed for assessing treatment efficiency.

[Cancer Control.](#) 2003 May-Jun;10(3):219-23.

Lymphatic mapping and sentinel node analysis to optimize laparoscopic resection and staging of colorectal cancer: an update.

[Bilchik AJ](#), [Trocha SD](#).

Source

John Wayne Cancer Institute, Saint John's Health Center, Santa Monica, CA 90404, USA.
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Abstract

BACKGROUND:

Laparoscopic colectomy for colorectal cancer (CRC) has been criticized because of the potential for inadequate nodal dissection and incomplete staging. Lymphatic mapping (LM) and sentinel lymph node (SLN) analysis can improve the accuracy of staging in open colectomy, but its utility during laparoscopic colectomy is unknown.

METHODS:

Between 1996 and 2002, 30 patients with clinically localized colorectal neoplasms or premalignant polyps underwent subserosal or submucosal injection of isosulfan blue dye via a colonoscope, via a percutaneously inserted spinal needle, or through a hand port. Blue-stained lymphatics were visualized through the laparoscope and followed to the SLN, which was tagged. The colectomy was completed in standard fashion. All lymph nodes were stained by hematoxylin and eosin, and multiple sections of each SLN were examined by immunohistochemical (IHC) staining using cytokeratin antibody.

RESULTS:

An SLN was identified laparoscopically in all patients. The SLN accurately predicted the tumor status of the nodal basin in 93% of cases. In 8 cases (29%), an unexpected lymphatic drainage pattern altered the extent of mesenteric resection, and in 4 cases (14%), tumor deposits were identified only by IHC and limited to the SLN.

CONCLUSIONS:

This study, which updates a preliminary report (Am Surg. 2002;68:561-565) confirms that SLN mapping during laparoscopic colon resection can alter the margins of resection and may improve staging by allowing a focused pathologic examination of the SLN, although direct comparison with the "gold standard" of open CRC with adequate lymphadenectomy will be required. Better ultrastaging of CRC lymph nodes may more accurately assign patients to prospective protocols to assess the significance of nodal micrometastases or isolated tumor cells.

[Can Assoc Radiol J](#). 2003 Apr;54(2):118-20.

Ultrasound-guided thrombin injection of femoral artery pseudoaneurysms.

[Etemad-Rezai R](#), [Peck DJ](#).

Source

London Health Sciences Centre, University Campus, 339 Windemere Rd., London, ON N6A 5A5.

Abstract

OBJECTIVE:

To evaluate whether the positive initial results for ultrasound-guided percutaneous thrombin injection of pseudoaneurysms, reported predominantly in small retrospective series, would be supported in a larger prospective trial.

METHODS:

In April 1999, our institution adopted ultrasound-guided thrombin injection as the initial treatment for post-catheterization arterial pseudoaneurysm. Colour Doppler imaging delineates the pseudoaneurysm, its neck and the adjacent artery. A 22-gauge spinal needle is attached to a 1-mL syringe preloaded with thrombin at a concentration of 1000 U/mL. Under ultrasound guidance, the needle tip is positioned within the pseudoaneurysm, and real-time colour Doppler imaging is used to monitor the pseudoaneurysm as thrombin is slowly injected. Thrombus formation commences almost immediately, and in most cases, occlusion is complete within 5 seconds.

RESULTS:

We successfully treated 61 pseudoaneurysms in 61 consecutive patients. The amount of thrombin injected ranged from 20 U to 3000 U (mean 435 U); 55 pseudoaneurysms were successfully treated after a single injection, and 6 patients required a repeat injection for complete occlusion. One patient had 2 pseudoaneurysms treated on consecutive days, and 1 developed a symptomatic vasovagal reaction, which was treated conservatively. No other significant procedural complications were encountered. Fifty-nine patients had a follow-up groin Doppler sonogram between 1 and 5 days after treatment.

CONCLUSION:

Ultrasound-guided percutaneous thrombin injection is an effective, simple, fast and safe treatment for post-catheterization arterial pseudoaneurysm. It has replaced ultrasound-guided compression repair at our institution and is now our treatment of choice.

[Acta Radiol.](#) 2003 Mar;44(2):213-7.

Comparison of preoperative simultaneous stereotactic fine needle aspiration biopsy and stereotactic core needle biopsy in ductal carcinoma in situ of the breast.

[Leifland K](#), [Lundquist H](#), [Lagerstedt U](#), [Svane G](#).

Source

Mammography Section, Department of Radiology, St. Göran Hospital Inc., Stockholm, Sweden. karin.leifland@capio.se

Abstract**PURPOSE:**

To compare the preoperative results of stereotactic fine needle aspiration biopsy (S-FNAB) with stereotactic core needle biopsy (S-CNB) performed simultaneously in breast lesions with the postoperative histopathological diagnosis of ductal carcinoma in situ (DCIS) of all histological grades.

MATERIAL AND METHODS:

733 consecutive stereotactic biopsies were performed between May 1993 and June 1999. In 72 patients with mammographic findings suspicious of malignancy who were subjected to breast surgery, postoperative histopathology showed DCIS. Preoperatively, S-FNAB and S-CNB had been done simultaneously in all patients, S-FNAB with spinal needle 0.7 or 0.9 mm and S-CNB was performed with an automated 2.1-mm biopsy gun. An average of 3 S-FNABs and 3 S-CNBs were performed in each patient.

RESULTS:

In 56 (78%) of the 72 patients S-CNB showed DCIS. In 3 patients (4%) the S-CNB revealed "probable carcinoma", in 7 patients (10%) "atypia" and in 6, the lesions were benign. In 34

(47%) of the 72 women S-FNABs showed carcinoma, not otherwise specified. In 6 cases (8%) the S-FNABs showed "probable carcinoma" and in 12 patients (17%) "atypia"; 8 lesions were benign and 12 not diagnostic.

CONCLUSION:

S-CNB was superior to S-FNAB in diagnosing DCIS. Only 6 patients (8%) received a benign or non-diagnostic preoperative diagnosis with S-CNB compared to 20 patients (28%) with S-FNAB. S-CNB was superior to S-FNAB for preoperative diagnosis of DCIS, but S-FNAB could further increase the sensitivity of the biopsy since it diagnosed cancer in 4 cases where S-CNB showed benign material.

[Prostate Cancer Prostatic Dis.](#) 2003;6(1):53-5.

Periprostatic local anesthesia eliminates pain of office-based transrectal prostate biopsy.

[Jones JS](#), [Ulchaker JC](#), [Nelson D](#), [Kursh ED](#), [Kitay R](#), [Angie S](#), [Horvat M](#), [Klein EA](#), [Zippe CD](#).

Source

Urological Institute, The Cleveland Clinic Foundation, Cleveland, Ohio 44195, USA.
jonesS7@ccf.org

Abstract

Up to 96% of patient who undergo prostate biopsy report pain. We performed periprostatic local anesthesia injection in an effort to improve patient acceptance of prostate biopsy. Sixty patients were randomized to receive either local injection of lidocaine in the periprostatic nerves or no anesthetic. Lidocaine was injected through a 7-inch spinal needle placed through a transrectal ultrasound biopsy guide. Ten-core biopsies were immediately performed. Following biopsy, all patients gave a Visual Analog Scale (VAS) assessment of their pain experienced during biopsy. A majority of patients reported Visual Analog Scale (VAS) scores in the moderate (28.6%) or severe (28.6%) ranges unless local anesthesia was given. Only one of 27 patients (3.7%) receiving local anesthetic reported moderate pain, and none reported severe pain. Mean VAS pain scores were 1.4 in the anesthetic group and 4.5 in the control group ($P < 0.0001$). No difficulty was encountered from scarring in the five patients who underwent nerve sparing radical retropubic prostatectomy following local anesthetic injection. Periprostatic injection of local anesthetic essentially eliminates pain from prostate biopsy. Nerve-sparing radical retropubic prostatectomy is not more difficult as a result.

[Vet Rec.](#) 2003 Feb 8;152(6):169-72.

Percutaneous puncture technique for treating persistent retropharyngeal lymph node infections in seven horses.

[De Clercq D](#), [van Loon G](#), [Nollet H](#), [Delesalle C](#), [Lefère L](#), [Deprez P](#).

Source

Department of Large Animal Internal Medicine, Faculty of Veterinary Medicine, Ghent University, Salisburylaan 133, B-9820 Merelbeke, Belgium.

Abstract

Between 1999 and 2001, seven horses with fever, dysphagia and a history of chronic upper respiratory tract infection lasting between three weeks and three months were examined. They had been treated unsuccessfully with a variety of antibiotics for three to four weeks. A deep abscess in a retropharyngeal lymph node was diagnosed in each case by clinical examination, endoscopy and echographic examination of the retropharyngeal region. The infected retropharyngeal lymph node of each horse was punctured with a spinal needle under ultrasound guidance. Pus was aspirated from four of the horses, and their abscesses were then rinsed with 0.9 per cent saline solution, and antibiotics (sodium ceftiofur or penicillin) were injected. In the other three horses the pus was too viscous to be aspirated, and the enlarged lymph node was opened along the tract of the needle and rinsed with chlorhexidine. All the horses were treated with penicillin for two weeks and in six of them the clinical signs gradually disappeared. The other horse continued to show fever and the penicillin treatment was continued for another 10 days, after which the signs gradually disappeared over a period of two months.

[J Am Assoc Gynecol Laparosc.](#) 2002 Nov;9(4):514-8.

The spinal needle test effectively measures abdominal wall thickness before cannula placement at laparoscopy.

[Milad MP](#), [Terkildsen MF](#).

Source

Department of Obstetrics and Gynecology, Northwestern University Medical School, 333 East Superior Street, Suite 1564, Chicago, IL 60611.

Abstract

STUDY OBJECTIVE:

To demonstrate the usefulness of the spinal needle test at laparoscopy to correlate abdominal wall thickness at initial entry sites with body mass index (BMI).

DESIGN:

Prospective cohort study (Canadian Task Force classification).

SETTING:

University-affiliated hospital.

PATIENTS:

One hundred thirty-eight women.

INTERVENTION:

Diagnostic laparoscopy.

MEASUREMENTS AND MAIN RESULTS:

After CO₂ insufflation, the spinal needle test was performed by inserting a spinal needle attached to a partially filled syringe and advancing it perpendicular to the skin until the gas pocket was reached. To improve precision, the distance was measured 3 times at two sites, the umbilicus and Palmer's point (left upper quadrant). Patients' mean BMI was 25.8 kg/m² (range 17.2-60.0 kg/m²), with 24 (17%) considered clinically obese (BMI > or =30 kg/m²). A significant correlation was noted between BMI and abdominal wall thickness at the umbilicus (R = 0.69) and left upper quadrant (R = 0.81). Excellent correlation was also noted between body weight and thickness at the two points (R = 0.72 and R = 0.78, respectively). The mean thickness at the umbilicus differed significantly between obese (3.0

+/- 1.2 cm) and nonobese women (1.7 +/- 0.7 cm, $p < 0.001$); as did mean thickness at the left upper quadrant (4.4 +/- 1.0 vs 2.0 +/- 0.7 cm, $p < 0.001$).

CONCLUSION:

Thickness of the abdominal wall at umbilical and left upper quadrant entry sites correlates well with weight and BMI. Even among obese women, the distance to the pocket of gas after insufflation at either entry site is remarkably small.

[J Matern Fetal Neonatal Med.](#) 2002 Mar;11(3):153-7.

Anticholinergic suppression of fetal rabbit upper gastrointestinal motility.

[Acosta R](#), [Lee JJ](#), [Oyachi N](#), [Buchmiller-Crair TL](#), [Atkinson JB](#), [Ross MG](#).

Source

Department of Obstetrics and Gynecology, Harbor-UCLA Medical Center, Torrance, California 90509-2910, USA.

Abstract

OBJECTIVE:

At birth the newborn digestive tract must assume the responsibility of assimilating nutrients for survival. Immature gastrointestinal motility in the neonate may result in impaired feeding and nutrition. Newborn gastrointestinal motility development requires the expression and functional maturation of gastrointestinal receptors. To explore the timing of fetal responses to gastrointestinal cholinergic motility agents, we assessed the effect of the anticholinergic agent atropine in the late-gestation rabbit fetus.

METHODS:

Seven pregnant New Zealand White rabbits were studied at day 30 of their normal 31-day gestation. In each litter, two fetuses were selected as study ($n = 14$) and two as control ($n = 14$). Under ultrasound guidance, a spinal needle was percutaneously inserted through the maternal uterus into the fetal stomach and 0.5 ml of gastric content was aspirated. Fluorescein, labelled with colored microspheres, and either atropine (0.04 microg/g fetal body weight) or normal saline were injected in a total volume of 0.5 ml. Two hours after injection, fetuses were delivered, the small intestine harvested, and the total small intestinal length and the distance the gastrointestinal fluorescein travelled were measured by ultraviolet light optical density. The fluorescein travelled distance and the per cent motility, defined as the length of fluorescein travelled divided by the total length of the small intestine, were calculated.

RESULTS:

All fetuses survived the intragastric injection. Mean fetal body weight at delivery was 44.2 +/- 6.7 and 46.8 +/- 7.2 g in atropine and control fetuses, respectively. The fluorescein travelled distance (15.4 +/- 4.2 vs. 19.0 +/- 4.3 cm; $p < 0.01$) and per cent motility (51.0 +/- 8.9 vs. 63.8 +/- 11.7%; $p < 0.01$) of atropine-treated fetuses were significantly lower than those of control fetuses.

CONCLUSION:

Fetal upper gastrointestinal motility is suppressed in response to intragastric atropine. These results indicate that fetal gastrointestinal cholinergic receptors are expressed and functional in the term (0.97 gestation) rabbit fetus. In utero administration of cholinergic agonists/antagonists may potentially modulate fetal gastrointestinal motility and absorption of amniotic fluid water and solutes.

[Arthroscopy](#). 2002 Oct;18(8):E43.

Differential arthroscopic portal placement for rotator cuff repair.

[Kim SH](#), [Ha KI](#), [Ahn JH](#), [Park JH](#).

Source

Department of Orthopaedic Surgery, Sungkyunkwan University School of Medicine, Samsung Medical Center and Sungkyunkwan University Sports Medicine Institute, Seoul, Korea.

Abstract

We report an effective technique of arthroscopic portal placement for rotator cuff repair of the shoulder. The differential portals are placed depending on the location of the tear. After the glenohumeral arthroscopic examination, the subacromial bursoscopy is performed through the same posterior skin portal. With the rotator cuff tear in view, a spinal needle is inserted to the center of the tear, 3 cm from the lateral margin of the acromion (middle working portal). Another spinal needle is then inserted into the posterior lip of the tear, 1 cm from the lateral margin of the acromion (rear viewing portal). The rear viewing portal provides a good downward en-face view of the tear, and the middle working portal allows better access to the anterior and posterior margins of the cuff tear than the usual posterior and lateral portals do. This differential portal placement with respect to the location of the rotator cuff tear ensures superior access for arthroscopic repair of rotator cuff tears.

[Arthroscopy](#). 2002 Oct;18(8):948-9.

Needle-assisted arthroscopic meniscal debridement.

[Lehman CR](#), [Meyers JF](#).

Source

Orthopaedic Research of Virginia, Tuckahoe Orthopaedic Associates, Richmond, Virginia 23294, USA. crlehman18@yahoo.com

Abstract

Arthroscopic partial meniscectomy is a time-proven procedure for treating irreparable meniscal tears. Central third bucket-handle tears may not be amenable to repair. The goals of resection are a stable meniscus with a smooth contour and removal of the displaced flap from the joint. However, a surgeon may encounter a multitude of tear configurations. Different techniques are necessary to deal with these different tear configurations without injuring the chondral surfaces or soft tissues. We report on the surgical technique of using a spinal needle to cut 1 attachment of the flap while a grasper is used to control the free piece. This technique avoids the need to morselize the flap and prevents the piece from becoming lost in the joint. Furthermore, the procedure is quick and safe and does not require an additional portal.

[J Vasc Surg](#). 2002 Oct;36(4):779-82.

A prospective study of ultrasound scan-guided thrombin injection of femoral pseudoaneurysm: a trend toward minimal medication.

[Olsen DM](#), [Rodriguez JA](#), [Vranic M](#), [Ramaiah V](#), [Ravi R](#), [Diethrich EB](#).

Source

Arizona Heart Institute, Phoenix, AZ 85006, USA.

Abstract

BACKGROUND:

Catheterizations and endovascular procedures in which the femoral artery is cannulated are sometimes complicated by iatrogenic pseudoaneurysms. Surgical repair of pseudoaneurysms was the treatment of choice until 1991 when compression was used in those that were small. A less uncomfortable technique involving the ultrasound scan-guided injection of thrombin (UGTI) has been used more recently. The purpose of this study was to prospectively evaluate the effectiveness of ultrasound scan-guided thrombin injection (UGTI) as a treatment of iatrogenic femoral pseudoaneurysms.

METHODS:

From December 1998 to December 2000, 3734 femoral artery catheterizations were performed, and from those, 32 consecutive patients with 33 femoral pseudoaneurysms (0.88%) of less than 8 cm were prospectively enrolled for UGTI. With sterile technique, a 21-gauge or 22-gauge spinal needle was used to access the pseudoaneurysm and thrombin (100 to 6000 international units [IU]) was slowly injected until thrombosis occurred.

RESULTS:

The initial success rate was 100%. Thirty-one cases (93.9%) remained successfully thrombosed with a single injection at day 30. Recurrence of two pseudoaneurysms (6.1%) was seen at day 1 and day 8. One patient had groin cellulitis develop, and the other had a bleed into the thigh after discharge; both were treated with open surgical repair. Fifteen patients underwent UGTI on an outpatient basis with 100% successful ablation. More than half of the patients were on an inpatient basis (53.1%). Hospital stay was 1 to 9 days, with 88.2% of the patients released on day 1 or 2. However, two patients had a prolonged stay: one from open repair (day 9) and the other from a gastrointestinal bleed (day 8). Pseudoaneurysms ranged from 1.7 to 7.5 cm and lasted 1 to 17 days before UGTI. Twenty-one of the patients (65.7%) continued undergoing anticoagulant therapy at the time of injection. Ten of the last 11 cases needed less than 800 IU, and nearly half of the pseudoaneurysms (49%) successfully thrombosed with less than 600 IU. No procedural complications or mortality were noted. No statistical significance was found between occurrence of the pseudoaneurysm and sheath size (with chi(2) test, P value = .05) or between the size of the pseudoaneurysm and successful thrombosis (with chi(2) test: degrees of freedom, 6 - 1 = 5; P value = .227426). A mean follow-up period of 11.8 months was documented (range, 71 to 24 months). Seven patients were lost to follow-up at less than 30 days.

CONCLUSION:

Percutaneous thrombin injection of iatrogenic pseudoaneurysms is an effective treatment. Not only is it minimally painful, but it can be done as an outpatient procedure and anticoagulation therapy does not hinder the success. Minimal thrombin seems necessary to successfully treat pseudoaneurysms that may further limit procedure-related complications.

Sonographically guided percutaneous sclerosis using 1% polidocanol in the treatment of vascular malformations.

[Jain R](#), [Bandhu S](#), [Sawhney S](#), [Mittal R](#).

Source

Department of Radiodiagnosis, All India Institute of Medical Sciences, Ansari Nagar, New Delhi 110-029, India.

Abstract

PURPOSE:

The aim of this prospective study was to assess the safety and efficacy of sonographically guided percutaneous injection of 1% polidocanol for sclerosis of peripheral vascular malformations.

METHODS:

Patients with vascular malformations of soft tissues were invited to enroll in the study. Gray-scale and color Doppler sonography were performed to determine the texture, margins, and size of the lesions and to determine whether high-velocity blood flow was present. Using real-time sonographic guidance, lesions were punctured with a 20/21-gauge spinal needle. When possible, venous return was occluded before injection. For each injection, 1-6 ml of 1% polidocanol was injected into 1 or more sites within the lesion. The sclerosing agent was not aspirated after injection. Repeat radiography was performed 1 month after each injection session. The procedure was repeated if the patient did not have a complete response, defined as an 80% or greater decrease in the volume of the lesion or resolution of the presenting symptoms.

RESULTS:

Of the 15 patients enrolled, 9 had venous malformations, 3 had lymphangiomas, 1 had a recurrent aneurysmal bone cyst, 1 had a venous pseudoaneurysm, and 1 had an arteriovenous malformation of the pinna. Each patient received 1-20 injections of 1% polidocanol (mean +/- standard deviation, 3.3 +/- 4.8 injections). This treatment resulted in a complete response of 7 venous malformations, 3 lymphangiomas, and the arteriovenous malformation and partial response of 2 venous malformations, the recurrent aneurysmal bone cyst, and the venous pseudoaneurysm. Only minor complications occurred.

CONCLUSIONS:

Sonographically guided percutaneous injection of 1% polidocanol for sclerosis of peripheral vascular lesions is simple, effective, and safe. This technique is especially effective in cases of soft tissue venous malformation and lymphangioma.

[Laryngoscope](#). 2002 Jun;112(6):990-6.

A preliminary report on micronized AlloDerm injection laryngoplasty.

[Pearl AW](#), [Woo P](#), [Ostrowski R](#), [Mojica J](#), [Mandell DL](#), [Costantino P](#).

Source

Department of Otolaryngology-Head and Neck Surgery, Mount Sinai Medical Center, New York, New York 10029, USA. pearla01@yahoo.com

Abstract

OBJECTIVES:

To report the preliminary data of voice and quality-of-life improvement after micronized AlloDerm injection laryngoplasty in patients with unilateral vocal cord paralysis.

STUDY DESIGN:

A prospective study was conducted in patients with unilateral vocal cord paralysis who underwent injection laryngoplasty with micronized AlloDerm.

METHODS:

Preoperative and postoperative patient evaluation consisted of videostrobolaryngoscopy, computer voice analysis, airflow, and voice handicap index (VHI) assessment. All injections were conducted with the patient under general anesthesia using the Storz injector system and a 22-gauge spinal needle.

RESULTS:

Fourteen patients received injection with an average amount of 0.641 mL. Twelve patients were available for evaluation. Initial results at 4 weeks (n = 12) showed significant increase in habitual phonation time from 3.84 to 6.72 seconds (P <.01) and a decrease in airflow from 0.616 to 0.295 l's (P <.01). The VHI rating improved from 62.8 to 37.5 (P <.01). Jitter and shimmer also improved significantly (P <.05). Stroboscopic findings showed complete closure of glottic gap in 10 patients with excellent return of mucosal wave on the injected side. The mucosal wave return after injection was rapid with little evidence of tissue reaction. Postoperative follow-up at 3 months (n = 8) demonstrated slight resorption of the material, but sustained excellent voice was noted in 87.5%. Minimal morbidity and tissue reaction were noted.

CONCLUSIONS:

Micronized AlloDerm appears to be a safe new material that is suitable for injection laryngoplasty. Long-term results are pending.

[Urology](#). 2002 Jul;60(1):109-14.

Focal "nerve-sparing" cryosurgery for treatment of primary prostate cancer: a new approach to preserving potency.

[Onik G](#), [Narayan P](#), [Vaughan D](#), [Dineen M](#), [Brunelle R](#).

Source

Division of Surgical Imaging, Department of Surgery and Urology, Center for Surgical Advancement, Celebration Health, Florida Hospital, Celebration, Florida 34747, USA.

Abstract

OBJECTIVES:

To present a pilot study in which 9 patients treated with focal, unilateral nerve-sparing cryosurgery were followed for up to 6 years. Cryosurgery, in which the whole gland is frozen, has a high rate of impotence, similar to non-nerve-sparing radical prostatectomy.

METHODS:

Before focal nerve-sparing cryosurgery, all patients underwent repeated biopsy on the side opposite the previous positive biopsy. One neurovascular bundle was spared on the side opposite the positive biopsy. Just before the start of freezing, a 22-gauge spinal needle was placed into Denonvilliers fascia using a transperineal route, and saline was injected to separate the rectum from the prostate. Combined hormone therapy was stopped in all patients postoperatively. The prostate-specific antigen (PSA) level was obtained every 3 months for the first 2 years and then every 6 months thereafter. Patients were considered to

have a stable PSA if they had two consecutive PSA measurements without a rise. All patients were strongly encouraged to undergo routine biopsies despite a stable PSA level.

RESULTS:

Between June 1995 and November 2000, 9 patients underwent focal, nerve-sparing cryosurgery. The follow-up ranged from 6 to 72 months (mean 36). All patients had stable PSA levels at last follow-up. Six patients routinely biopsied had negative biopsies. Potency (defined as an erection sufficient to complete intercourse to the satisfaction of the patient) was maintained in 7 of 9 patients.

CONCLUSIONS:

Focal nerve-sparing cryosurgery, in which one neurovascular bundle is spared, appears to preserve potency in most patients without compromising cancer control. These preliminary results warrant further study.

[Theriogenology](#). 2002 Mar 1;57(4):1199-205.

Ultrasound-guided injection of contrast medium into the crus penis for diagnosis of erection failure in bulls.

[Nöthling JO](#), [Irons PC](#), [Gerber D](#).

Source

Department of Reproduction, Faculty of Veterinary Science, University of Pretoria, Onderstepoort, South Africa.

Abstract

The objectives of this study were to demonstrate the ability to cannulate the crurae of the bull's penis under ultrasound guidance, to demonstrate contrast medium injected by this route in the distal penis, and to confirm the technique to be safe and repeatable. Five adult bulls with normal serving ability were used, one being subjected to the procedure twice. The procedure was performed with the bulls under general anesthesia and in lateral recumbency. A spinal needle was passed through the skin and into the crus penis under ultrasound guidance and two syringes containing an iodine-based contrast medium were connected to it. Stimulation using an electro-ejaculator with a rectal probe was initiated, and when the penis started developing an erection, 50-100 ml of contrast medium was injected. Lateral and ventro-dorsal radiographs were taken of the extended penis during, and at intervals after, injection. After a rest period of 5 min, clearance of the contrast medium was confirmed and the procedure was repeated on the other crus penis. Each case therefore, contained two attempts. Successful cannulation of the crus penis was confirmed by observing indentation of its fibrous wall by the needle, free flow of blood, lack of resistance to the injection of air, which could be seen in the crus, and fluctuation of resistance to injection in synchrony with the pulsation of the electroejaculator. Contrast medium was demonstrated in the mid or distal portion of the penis in all six cases, or on 9 of the 12 attempts. Attainment of penile erection, a larger volume of contrast medium, and the order of cannulation all enhanced flow of contrast medium to the distal portion of the penis, with the first crus giving better results. On one occasion the needle worked out of the crus penis during stimulation, resulting in injection of contrast medium into the corpus spongiosum penis. All bulls recovered uneventfully and returned to normal serving ability. It is concluded that ultrasound-guided cannulation of the crus penis is a safe and successful method for the injection of contrast medium for contrast studies of the penis, and is less invasive than the surgical method.

[J Am Vet Med Assoc.](#) 2002 May 1;220(9):1348-52.

Percutaneous collection of fetal fluids for detection of bovine viral diarrhoea virus infection in cattle.

[Callan RJ](#), [Schnackel JA](#), [Van Campen H](#), [Mortimer RG](#), [Cavender JA](#), [Williams ES](#).

Source

Department of Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins 80523-1620, USA.

Abstract

OBJECTIVE:

To develop a method for percutaneous collection of fetal fluid from cattle in the late stages of gestation and determine whether bovine viral diarrhoea virus (BVDV) can be isolated from such fluids.

DESIGN:

Case series.

ANIMALS:

169 pregnant beef cattle.

PROCEDURE:

Animals were restrained in a squeeze chute, and hair was clipped from a region of the right flank. Pregnancy was confirmed, and fetal fluids were identified by means of abdominal ultrasonography. Fetal fluid was collected with a spinal needle. Virus isolation was performed on fetal fluids, WBC lysates from 160 live calves, and tissues from 12 calves that died or were aborted. Blood samples collected from adult cattle were assayed with an immunoperoxidase monolayer assay.

RESULTS:

Fourteen animals aborted or delivered premature calves within 3 weeks after fetal fluid collection; however, it could not be determined whether this was a complication of the procedure or attributable to other factors. Results of BVDV isolation from fetal fluid samples were negative for 168 animals. However, a noncytopathic BVDV was isolated from fetal fluid obtained from a 2-year-old heifer; results of the immunoperoxidase assay of serum from this heifer were also positive, and a noncytopathic BVDV was isolated from tissue specimens from a stillborn calf produced by this heifer.

CONCLUSIONS AND CLINICAL RELEVANCE:

Results suggest that fetal fluids can be collected percutaneously from cattle in the late stages of gestation and that virus isolation performed on fetal fluids can be used to identify fetuses infected with BVDV in utero. However, safety of the procedure could not be evaluated.

[J Craniomaxillofac Trauma.](#) 1997 Fall;3(2):43-8.

Transnasal canthoplasty.

[Fink SC](#), [Gocken DJ](#), [Oh AK](#), [Hardesty RA](#).

Source

Department of General Surgery, St. Barnabas, Livingston, New Jersey, USA.

Abstract

The reconstruction of a traumatic telecanthus, particularly the repositioning and securing of the medial canthal tendon, presents a challenge to the reconstructive surgeon. The adequate positioning of the medial canthal tendon for proper intercanthal distance, and apposition of the lid to the globe, is the cornerstone of a successful reconstruction. The authors have developed a technique for transnasal canthoplasty that is fast, relatively easy, and safe. Transnasally, a 16-gauge spinal needle is introduced over a preplaced K-wire using a 4-0 Bunnell stainless wire suture (Ethicon, Somerville, NJ). The medial canthal tendon is lassoed, secured, and then fixed to the contralateral nasal bone. Six patients have undergone this technique to date. The authors believe this procedure offers an improvement to existing methods.

[AJNR Am J Neuroradiol.](#) 2002 Apr;23(4):605-8.

Real-time CT-guided spinal biopsy with a disposable stereotactic device: a technical note.

[Chakeres D](#), [Slone W](#), [Christoforidis G](#), [Bourekas E](#).

Source

Department of Radiology, Ohio State University College of Medicine and Public Health, Columbus, Ohio, USA.

Abstract

We compared eight spinal needle biopsy procedures performed with an investigational disposable real-time stereotactic device and eight spinal needle freehand biopsies in which a standard technique was used, to determine whether the investigational device added value to the procedure. The device uses a simple stereotactic diaphragm pattern to define two vector points. The procedures in which the device was used were completed in 38% less time, using 50% fewer images, with considerably improved spatial accuracy and increased operator confidence, despite the device learning curve.

[Minim Invasive Neurosurg.](#) 2002 Mar;45(1):62-4.

A new instrument facilitates the needle trephination procedure: technical note.

[Heese O](#), [Sepehrnia A](#).

Source

Department of Neurosurgery, Medical University of Lübeck, Lübeck, Germany.
oliverheese@hotmail.com

Abstract

INTRODUCTION:

Percutaneous needle trephination is a well known neurosurgical procedure. The aim of this study was to develop a new instrument, which allows a stable fixation of an 18-G spinal needle in order to improve handling and precision of percutaneous needle trephinations.

METHODS AND INSTRUMENTATION: The needle stabilizer was designed in a T-shape fashion morphologically similar to a corkscrew. The length of the uncovered needle tip is adjustable for individual requirements.

RESULTS:

Using the new needle stabilizing device a total number of 18 percutaneous needle trephinations were performed for the following indications: subdural hematoma, epidural hygroma, bifrontal air accumulation, superficial tumor cyst, superficial brain abscess. No complications have been observed.

DISCUSSION:

Our experience using this device shows that the modified technique fulfils criteria for clinical acceptance such as simplicity, low risk, reliability and cost effectiveness.

[Comp Med.](#) 2001 Apr;51(2):134-7.

Transoral intratracheal inoculation method for use with neonatal rats.

[Martínez-Burnes J](#), [López A](#), [Lemke K](#), [Dobbin G](#).

Source

Department of Pathology and Microbiology, Atlantic Veterinary College, University of Prince Edward Island, Charlottetown, Canada.

Abstract**BACKGROUND AND PURPOSE:**

Studying the effects of toxic and infective compounds on the respiratory system requires a reliable method for delivering inoculum into the distal region of the lung. Although transoral intratracheal inoculation methods have been well documented for adult rats, to the authors' knowledge, a reliable method has not been validated for neonatal rats. The purpose of the study reported here was to develop a simple method for transoral inoculation in rat neonates.

METHODS:

Seven-day-old Fischer 344 rats were anesthetized with halothane, and a spinal needle was inserted in the tracheal lumen, by use of illumination and a modified otoscope. Meconium was injected into the lungs as a marker, and the neonates were kept under close observation. After euthanasia at 24 h, lungs were removed and fixed in formalin, and the microscopic distribution of the inoculum was assessed in the left, right cranial, middle, median, and caudal lung lobes.

RESULTS:

Microscopic examination of lungs indicated that intratracheal inoculation was achieved in 100% of neonatal lungs and the inoculum was consistently distributed in the alveoli of all pulmonary lobes. Important complications or mortality were not observed in the neonates.

CONCLUSIONS:

Intratracheal inoculation of neonatal rats is possible by use of a modified otoscope for transoral illumination. This technique is simple and reproducible and ensures, without complications, widespread distribution of inoculum in the lungs of neonatal rats.

[Neurosurgery.](#) 2001 Nov;49(5):1267-9.

Peritoneography in the assessment of peritoneal cerebrospinal fluid absorption potential for distal

ventriculoperitoneal shunt catheter placement: technical case report.

[McAuley D](#), [Dick AC](#), [Paterson A](#).

Source

Department of Neurosurgery, Royal Victoria Hospital, Belfast, Northern Ireland BT12 6BA.
mcauley davidj@hotmail.com

Abstract

OBJECTIVE AND IMPORTANCE:

Distal ventriculoperitoneal shunt failure has been associated with absorption failure secondary to previous peritonitis. This assumption has caused surgeons to seek alternate sites for distal catheter placement. We propose that the absorptive potential of the peritoneal cavity should be assessed before that site is discounted for catheter placement.

CLINICAL PRESENTATION:

The case of a 14-month-old male patient is presented, demonstrating multiple ventriculoperitoneal shunt placement procedures and a diagnostic dilemma with respect to distal shunt placement. Peritoneography was performed to demonstrate peritoneal fluid absorption, allowing subsequent placement of a new distal shunt catheter with good clinical results.

TECHNIQUE:

Using aseptic technique, a 24-gauge spinal needle was inserted in the midline of the abdomen and water-soluble contrast material was instilled. Delayed radiographs delineated peritoneal adhesions and demonstrated renal excretion of the contrast material, confirming peritoneal absorption.

CONCLUSION:

The peritoneal cavity remains the site of choice for distal shunt catheter placement. If failure of peritoneal cerebrospinal fluid absorption is suspected as a cause of shunt failure, then peritoneography with water-soluble contrast material may be safely used to demonstrate the adequacy of fluid absorption before a secondary site is chosen.

[J Surg Res](#). 2001 Nov;101(1):68-72.

Ontogeny of fetal rabbit upper gastrointestinal motility.

[Sase M](#), [Lee JJ](#), [Park JY](#), [Thakur A](#), [Ross MG](#), [Buchmiller-Crair TL](#).

Source

Department of Surgery, UCLA Medical Center, Los Angeles, CA, USA.

Abstract

BACKGROUND:

The gastrointestinal (GI) tract performs the digestion, propulsion, and absorption of nutrients both pre- and postnatally, although little is known about the development of fetal motility. We evaluated the development of GI motility using a novel fetal rabbit model.

METHODS:

Nine pregnant rabbits were obtained and three litters were studied at day 24 (n = 24), 27 (n = 29), and 30 (n = 24) of their 31-day gestation. Under ultrasound guidance fetal position was identified, a spinal needle was percutaneously inserted into each fetal stomach, and fluorescein, labeled with color-coded microspheres, was injected. Two hours later, fetuses

were delivered and weighed, and the small intestine was harvested. The absolute length of fluorescein traveled was measured by ultraviolet light optical density and the percentage motility was calculated by dividing the absolute length of fluorescein traveled by the total small intestinal length.

RESULTS:

All injected fetuses survived. The length of fluorescein traveled significantly increased from day 24 (8.1 +/- 2.1 cm) to day 27 (18.8 +/- 4.6 cm) and 30 (22.6 +/- 5.2 cm). The length of fluorescein traveled significantly correlated with body weight on day 27 and 30. Calculated percentage motility significantly increased from day 24 to 30. However, percentage motility showed no correlation with fetal weight.

CONCLUSIONS:

This study describes a novel rabbit model for the assessment of in vivo fetal GI motility. Motility matured during the last third of gestation when assessed by the absolute length of fluorescein travel and the percentage motility. These results confirm that late-gestation fetuses have developed sufficient motility to propel potential nutrients, drugs, or gene therapy vectors to the small intestinal absorptive surface area.

[J Pediatr Surg.](#) 2001 Aug;36(8):1266-8.

A simple technique for preventing bar displacement with the Nuss repair of pectus excavatum.

[Hebra A](#), [Gauderer MW](#), [Tagge EP](#), [Adamson WT](#), [Othersen HB Jr](#).

Source

Medical University of South Carolina, Charleston, SC 29425-2270, USA.

Abstract

BACKGROUND/PURPOSE:

The most common complication of the minimally invasive technique for repair of pectus excavatum (MIRPE) is bar displacement, which has been reported to occur in 9.5% of all cases, particularly in teenaged patients. The use of a lateral stabilizing bar has improved stability but has not eliminated the occurrence of this problem. The authors report a new technique added to the standard MIRPE that creates an additional third point of fixation of the pectus bar to prevent displacement.

METHODS:

The technique requires the simple placement, via a spinal needle, of a nonabsorbable suture next to the sternum, encircling a rib and the bar, using a single 3-mm stab wound and thoroscopic guidance. The suture simply is buried under the skin. Since 1998, this technique has been applied to 20 patients who underwent MIRPE.

RESULTS:

The average age was 14 years; 80% were boys. Average operating time was 75 minutes, and all patients had thoracoscopy with the MIRPE. A lateral stabilizing bar also was used in 14 patients. Four patients had 2 struts placed. Average length of stay was 5.5 days. There were no early complications. Mean follow-up was 12 months. Bar displacement occurred in 1 patient early in the series in which an absorbable suture was used for fixation. One patient had a prolonged hospital stay of 7 days because of postoperative pain.

CONCLUSIONS:

This modification to the original technique of MIRPE creates a 3-point fixation system that minimizes the risk of bar shifting even in teenaged patients. It does not add any significant

time or cost to the operation, and it is fairly simple to perform. The authors believe that this technique decreases the occurrence of bar displacement, and they recommend its use for all patients with pectus excavatum considered candidates for the Nuss repair.

[Diagn Cytopathol.](#) 2001 May;24(5):356-60.

Carcinoma of temporal bone, base of the skull: diagnosis by needle aspiration cytology.

[Zaharopoulos P.](#)

Source

Department of Pathology, University of Texas Medical Branch, Galveston, Texas, USA.

Abstract

We report on a 68-yr-old male with a destructive bone lesion involving the temporal bone at the skull base extending to surrounding osseous structures and the infratemporal fossa, defined by needle aspiration cytology as carcinoma in association with inflammatory reaction, bacterial type, and bone destruction. The technique of the aspiration, which was performed by a cytopathologist directing a spinal needle into the region of the destroyed temporal bone as outlined in the radiographs of prior magnetic resonance imaging (MRI), is discussed. The application of this technique in the cytologic sampling of deeper lesions usually of soft or osseous tissues not accessible to ordinary fine-needle aspiration is presented. There is also a brief discussion of neoplastic lesions involving the temporal bone at the skull base and the anatomic concerns in sampling lesions in this difficult-to-approach region of the body.

[Headache.](#) 2001 Apr;41(4):385-90.

Use of atraumatic spinal needles among neurologists in the United States.

[Birnbach DJ](#), [Kuroda MM](#), [Sternman D](#), [Thys DM](#).

Source

Department of Anesthesiology, St. Luke's-Roosevelt Hospital Center, College of Physicians and Surgeons, Columbia University, New York, NY 10019, USA

Abstract

OBJECTIVE:

To evaluate atraumatic spinal needle use among US neurologists.

BACKGROUND:

Postdural puncture headache following lumbar puncture may be dramatically reduced through the use of atraumatic pencil-point spinal needles. It was hypothesized that atraumatic spinal needles are rarely used by members of specialties outside of anesthesiology. To determine the extent to which atraumatic spinal needles are currently being used for lumbar puncture in the United States, American neurologists (one group of physicians who regularly perform lumbar punctures) were surveyed.

METHODS:

A questionnaire was mailed to all 7798 members of the American Academy of Neurology listed in the membership directory. The questionnaire included items pertaining to age,

practice setting, knowledge of pencil-point (atraumatic) spinal needles, and lumbar puncture practices.

RESULTS:

Only a fraction (2%) of the neurologists surveyed routinely use atraumatic spinal needles. Almost half of the responding neurologists reported having no knowledge of pencil-point spinal needles. Among those who did have knowledge of these new spinal needles, the most common reasons given for not using them were nonavailability and expense.

CONCLUSIONS:

Atraumatic spinal needles for lumbar puncture have been shown to dramatically decrease the risk of postdural puncture headache. Although the use of these needles is standard practice among anesthesiologists, they have not been adopted by other medical specialties. This may lead to unnecessary morbidity among patients undergoing lumbar puncture.

[J Surg Res.](#) 2001 Feb;95(2):188-94.

Injection of allogeneic bone marrow cells into the portal vein of swine in utero.

[Rubin JP](#), [Cober SR](#), [Butler PE](#), [Randolph MA](#), [Gazelle GS](#), [Ierino FL](#), [Sachs DH](#), [Lee WP](#).

Source

Division of Plastic and Reconstructive Surgery, Massachusetts General Hospital, Boston, Massachusetts, 02114, USA.

Abstract

The ability to safely manipulate the immune system of the developing fetus carries the hope of effective treatment strategies for certain congenital disorders that can be diagnosed during gestation. One possible intervention is the induction of specific transplantation tolerance to an adult donor who could provide tissue after birth without the need for immunosuppression. Although the introduction of allogeneic stem cells to a developing immune system has been shown to result in hematopoietic chimerism, donor-specific transplantation tolerance has not been demonstrated in a large animal model. In previous reports of in utero stem-cell transplantation, the cells were injected into the fetus by an intraperitoneal route. We sought to improve upon this technique of cell transplantation by developing a method for the safe delivery of allogeneic stem cells directly into the hepatic circulation of fetal swine. In the second phase of our study, we determined if adult allogeneic bone marrow cells delivered to the fetus by this intravascular route could result in hematopoietic chimerism and donor-specific transplantation tolerance. A method of successful intravascular injection was designed in which a laparotomy was performed on a sow at midgestation (50-55 days) to administer 1 cc of inoculum into the portal vein of each fetus using transuterine ultrasound guidance and a 25-gauge spinal needle. In one sow, 10 piglets were injected with saline to test safety, and 8 piglets were born. For transplantation of stem cells to the fetuses, donor bone marrow was harvested from a genetically defined miniature swine. In one sow the marrow was injected without T-cell depletion resulting in abortion. In the third sow, the marrow was depleted of T-cells to less than 0.01% using magnetic beads conjugated to anti-CD3 monoclonal antibodies. No chimerism was detected in these offspring. Only in the fourth sow where the T-cell depletion was reduced to about 1% of the cells in the inoculum did one animal demonstrate chimerism. This piglet showed reproducible blood chimerism (0.95% donor cells) detected by flow cytometry measurement of monoclonal antibodies to the donor MHC. In addition, this animal demonstrated hyporesponsiveness to donor lymphocytes in an

MLR assay while reacting strongly to third-party stimulator cells. A split-thickness skin graft from the donor was accepted, and a third-party graft was rapidly rejected.

[Int J Tuberc Lung Dis.](#) 2000 Dec;4(12):1164-8.

Ultrasound guided fine needle aspiration biopsy in mediastinal tuberculosis.

[Gulati M](#), [Venkataramu NK](#), [Gupta S](#), [Sood BP](#), [Sheena DM](#), [Gupta SK](#), [Suri S](#).

Source

Department of Radiodiagnosis, Postgraduate Institute of Medical Education and Research, Chandigarh, India. iriank@ch1.dot.net.in

Abstract

SETTING:

Diagnosis of mediastinal tuberculosis (TB) is difficult due to non-specific clinical features and lack of characteristic radiographic features. Histopathological confirmation has often required computed tomography guided fine needle aspiration biopsy (FNAB) or even invasive procedures such as mediastinoscopy or open/surgical biopsy. FNAB under ultrasound (US) guidance can also be performed in this clinical setting.

OBJECTIVE:

To define the role of percutaneous US guided FNAB in the diagnosis of mediastinal tuberculosis.

DESIGN:

Twenty-six patients with a proven diagnosis of mediastinal TB formed the study group. Chest radiographs and sputum examination were negative. FNAB was performed via suprasternal (n = 20) and parasternal (n = 6) route under sonographic guidance using 22G spinal needle. Aspirates were considered positive for TB when epithelioid cell granuloma with caseation necrosis and/or the presence of Mycobacterium tuberculosis by acid-fast bacilli (AFB) or culture was demonstrated, indeterminate when epithelioid cell granulomas were seen but without caseation necrosis or AFB, and negative when aspirate contained non-representative material.

RESULTS:

A total of 30 biopsies were performed in the 26 patients, including repeat biopsy and biopsy of different sites in two patients each. FNAB was positive for TB in 20 of the 26 patients. In four, AFB were demonstrated, and in seven culture was positive for M. tuberculosis; in the remaining six patients, cytologic diagnosis was indeterminate in four and negative in two. No procedure related complications were noted.

CONCLUSION:

Ultrasound guided FNAB is a safe, effective technique in the diagnosis of mediastinal TB.

[Prenat Diagn.](#) 2000 Nov;20(11):900-4.

Prenatal diagnosis of haemoglobin Bart's disease by cordocentesis at 12-14 weeks--experience with the first 59 cases.

[Lam YH](#), [Tang MH](#).

Source

Department of Obstetrics and Gynaecology, The University of Hong Kong, Tsan Yuk Hospital, Hong Kong, China. yhlam@hkucc.hku.hk

Abstract

We have shown that fetuses affected by haemoglobin (Hb) Bart's disease can be reliably identified by their sonographic manifestation of cardiac enlargement at 12-14 weeks. Between 1995 and 1999, 282 couples were seen before 15 weeks. They were offered the options of chorionic villus sampling, or amniocentesis and DNA study, or ultrasound examination at 12-14 weeks, followed by cordocentesis and Hb study only when the ultrasound findings were abnormal. Two hundred and thirty-four at-risk pregnancies had ultrasound assessment at 12-14 weeks, 62 fetuses showed enlarged cardiothoracic ratio [mean (SD) 0.54 (0.02)] and four of them also had hydropic changes. Fifty-nine women agreed to undergo cordocentesis at 12-14 weeks and the procedure was successful in 57 cases (97%). Cordocentesis were performed by a freehand technique using a 26- or 24-gauge spinal needle with a 20-gauge introducer. Fifteen fetuses (25%) had bleeding from the cord and 12 fetuses (20%) had bradycardia following cordocentesis. The fetal loss rate was 8% (5/59). Hb Bart's disease was confirmed in all the 62 fetuses with cardiac enlargement. Their Hb concentration ranged between 3.1 to 8.4 g/dl. One hundred and seventy-two fetuses had normal ultrasound assessment and 148 of them were confirmed to be unaffected by Hb Bart's disease. Twenty-three pregnancies were ongoing and one miscarried at 15 weeks. We believe that sonographic assessment followed by selective cordocentesis at 12-14 weeks is a feasible prenatal diagnostic option for Hb Bart's disease.

[Radiology](#). 2000 Dec;217(3):673-7.

Thyroid tissue: US-guided percutaneous interstitial laser ablation-a feasibility study.

[Pacella CM](#), [Bizzarri G](#), [Guglielmi R](#), [Anelli V](#), [Bianchini A](#), [Crescenzi A](#), [Pacella S](#), [Papini E](#).

Source

Departments of Diagnostic Imaging, and Endocrine, Metabolic, and Digestive Diseases, Regina Apostolorum Hospital, Via San Francesco, 50, 00041 Albano Laziale, Rome, Italy. cmpac@tin.it

Abstract

PURPOSE:

To evaluate percutaneous interstitial laser photocoagulation (ILP) as a palliative treatment of recurrent thyroid carcinoma untreatable with surgery or radioiodine administration.

MATERIALS AND METHODS:

By using 18 resected thyroid glands, the volume and histologic pattern of ILP-induced thyroid damage were assessed. In vivo treatment feasibility was evaluated by using a low-energy laser in two volunteers before thyroidectomy for huge autonomously functioning nodules. With ultrasonographic (US) monitoring, a 21-gauge spinal needle was inserted into the thyroid nodules. A 300-microm quartz fiberoptic guide was inserted through the needle lumen, and the fiber tip was placed in direct contact with the tissue. Laser irradiation was performed with a 1.064-nm Nd:YAG laser in surgically resected glands, which were treated with 2, 3, 5, or 7 W.

RESULTS:

Tissue ablation was well-defined histologically, and its area was related to laser irradiation parameters (range, 0-26 mm). No correlation was found between US images and the actual extent of laser-induced lesions. Large colloid or fluid collections did not permit regular heat diffusion within the tissue. In vivo low-energy ILP was performed without technical difficulties or complications.

CONCLUSION:

ILP induces well-defined tissue ablation correlated with energy parameters in thyroid glands devoid of cystic areas. ILP could be a therapeutic tool for highly selected problems in thyroid tumor treatment.

[Semin Urol Oncol](#). 2000 May;18(2):142-6.

Patient perception of local anesthesia for prostate brachytherapy.

[Smathers S](#), [Wallner K](#), [Simpson C](#), [Roof J](#).

Source

Radiation Oncology, Puget Sound Health Care System, Department of Veterans Affairs, Seattle, WA 98108-1597, USA.

Abstract

Prostate brachytherapy is an increasingly popular treatment for early-stage prostate cancer. Until now, spinal or general anesthesia for the procedure has been the standard of care. For patient safety, patient convenience, and to limit use of operating facilities, the authors started performing implants routinely with local anesthesia. We present here an evaluation of patients' acceptance of prostate brachytherapy under local anesthesia. On arrival at our department on the morning of the procedure, the patient is brought into the simulator suite, an intravenous line is started, and a urinary catheter is inserted. With the patient in the lithotomy position, a 5-by-5-cm patch of perineal skin and subcutaneous tissue is anesthetized by local infiltration of 10 mL of 1% lidocaine, using a 25-gauge 5/8-inch needle. Immediately following injection into the subcutaneous tissues, the deeper tissues, including the pelvic floor and prostate apex, are anesthetized by injecting 15 mL lidocaine solution with approximately 8 passes of a 20-gauge 1-inch needle. Following subcutaneous and periapical lidocaine injections, the transrectal ultrasound (TRUS) probe is positioned to reproduce the planning images and a 3.5- or 6-inch, 22-gauge spinal needle is inserted into the peripheral planned needle tracks, monitored by TRUS. When the tips of the needles reach the prostatic base, about 1 mL of lidocaine solution is injected in the intraprostatic track, as the needle is slowly withdrawn. The lidocaine infiltration procedure takes approximately 10 to 15 minutes. Seed implantation is then performed as previously described. At the time of this report preparation, 58 of the 71 patients (81%) were interviewed, with a median follow-up of 6 months since the implant procedure. On a scale of 1 to 10, the median biopsy pain score was 4.5 compared with a median pain score with the implant procedure of 3.0. There was no clear correlation between the two scores ($r = .26$). There was no correlation between patients' implant pain score and the number of implant needles used, the pre-implant prostate size, or patient age. The prostate radiation dose coverage, calculated as the percent of the post-implant volume covered by the prescription isodose, averaged 88% (range, 75% to 99%). Five of the 55 patients interviewed (9%) stated that they would have preferred to have the procedure under general anesthesia. Ranked on a 1 to 5 scale, the median patient satisfaction was 5 and the average was 4.4. The substitution of local anesthesia has facilitated rapid introduction of a high-volume brachytherapy program at an institution, without requiring the allocation of

significant operating room time. We are pleased with the overall level of patient comfort and satisfaction.

[J Endourol.](#) 2000 Mar;14(2):155-9.

Radiofrequency ablation of rabbit kidney using liquid electrode: acute and chronic observations.

[Patel VR](#), [Leveillee RJ](#), [Hoey MF](#), [Herron AJ](#), [Zaias J](#), [Hulbert JC](#).

Source

Department of Urology, University of Miami School of Medicine, Florida, USA.
vpatel2171@aol.com

Abstract

BACKGROUND AND PURPOSE:

The percentage of small renal tumors being diagnosed has increased at least five-fold in the last 20 years. The question of how best to treat these lesions remains unanswered. We studied the effectiveness of "wet" radiofrequency (RF) ablation of renal tissue.

MATERIALS AND METHODS:

New Zealand white rabbits (N = 48) underwent a 1- or 2-minute ablation of renal parenchyma with a modified insulated spinal needle capable of infusing saline, measuring temperature and impedance, and delivering RF energy. Animals were followed and examined up to 54 days after surgery.

RESULTS:

All animals survived for the planned period. Intravenous urograms showed no fistula or urinoma formation and confirmed continued function of the remaining parenchyma. The 1-minute treatments consistently ablated 20% to 25% (average 7 cm) of the tissue, whereas the 2-minute treatments ablated 34% to 36% (average 10 cm). Acutely, there was coagulative necrosis and infiltration of inflammatory cells. Chronically, there were well-demarcated lesions with complete effacement of the tubular epithelium and destruction of the glomeruli.

CONCLUSION:

Wet radiofrequency ablation with a liquid electrode can reproducibly create large lesions safely and quickly. The technique may soon become an alternative, minimally invasive therapy for small renal tumors

[Fetal Diagn Ther.](#) 2000 Jan-Feb;15(1):1-3.

Treatment of heterotopic cervical and intrauterine pregnancy.

[Carreno CA](#), [King M](#), [Johnson MP](#), [Yaron Y](#), [Diamond MP](#), [Bush D](#), [Evans MI](#).

Source

Department of Obstetrics, Wayne State University, Detroit, Mich., USA.

Abstract

OBJECTIVE:

To find a suitable technique to selectively terminate a cervically implanted embryo while maintaining viability of a concomitant intrauterine pregnancy.

METHODS:

A 34-year-old patient achieved a twin pregnancy after 4 IVF attempts. Ultrasound revealed a viable intrauterine and cervical pregnancy. Given our experience with KCl injection for fetal reduction, we offered the patient an attempt to reduce the cervical pregnancy.

RESULTS:

Best visualization in this case was obtained by transabdominal scanning. A 6-inch 20-gauge spinal needle was inserted transcervically and maneuvered into the thorax of the embryo. Fetal heart rate ceased even before KCl could be injected. Then 3 cm(3) of saline were injected to provide better visualization of the cervical fetus, and to confirm absence of heart beat. The patient had minor vaginal bleeding for several days. The intrauterine pregnancy progressed uneventfully through 36(1)/(2) weeks with delivery of a healthy, 2, 700-gram newborn.

CONCLUSION:

Cervical pregnancy is usually considered a life-threatening event. Other factors such as concomitant intrauterine pregnancy and the patient's infertility history generally would be secondary concerns. In this case, we were able to selectively terminate the cervical pregnancy, while preserving the intrauterine one, allowing this couple to have a healthy newborn. Further cases will be necessary to appropriately define risk rates for such an approach.

[AJR Am J Roentgenol.](#) 1999 Dec;173(6):1505-8.

Surveillance CT and the prompt use of CT-guided fine-needle aspiration in patients with head and neck cancer who have undergone surgery.

[Som PM](#), [Silvers AR](#), [Urken ML](#).

Source

Department of Radiology, the Mount Sinai School of Medicine, City University of New York, NY 10029, USA.

Abstract

OBJECTIVE:

The purpose of this study was to assess the usefulness of prompt CT-guided fine-needle aspiration in the evaluation of suspected tumor recurrence seen on surveillance images of patients who had undergone surgery for head and neck cancer.

SUBJECTS AND METHODS:

We reviewed 32 patients who had undergone CT-guided fine-needle aspiration after surgery for head and neck cancer. CT-guided fine-needle aspiration was performed with a 22-gauge spinal needle and a cytopathologist was present to assess the adequacy of the biopsy sample. As many as five needle passes were made.

RESULTS:

Of the 32 cases, pathologic findings revealed squamous cell carcinoma (n = 27), mucoepidermoid carcinoma (n = 2), neuroendocrine carcinoma (n = 1), papillary thyroid carcinoma (n = 1), and adenocarcinoma (n = 1). In 20 cases (62.5%) the results of CT-guided fine-needle aspiration were positive for tumor recurrence, whereas in 11 cases (34.4%) the results were negative. In one case (3.1%) the results were nondiagnostic. Of the 11 patients

with negative findings on CT-guided fine-needle aspiration, two patients had a subsequent recurrence that was not at the biopsy site. There were no complications from the procedure.

CONCLUSION:

When a radiologist who is trained in head and neck imaging identifies with CT a possible early recurrence of tumor, the prompt use of CT-guided fine-needle aspiration is an effective way to diagnose these tumors so that appropriate treatment can be initiated.

[Int J Radiat Oncol Biol Phys.](#) 1999 Sep 1;45(2):401-6.

Local anesthesia for prostate brachytherapy.

[Wallner K](#), [Simpson C](#), [Roof J](#), [Arthurs S](#), [Korssjoen T](#), [Sutlief S](#).

Source

Radiation Oncology, Puget Sound Health Care System, Department of Veterans Affairs, Seattle, WA 98108-1597, USA.

Abstract

PURPOSE:

To demonstrate the technique and feasibility of prostate brachytherapy performed with local anesthesia only.

METHODS AND MATERIALS:

A 5 by 5 cm patch of perineal skin and subcutaneous tissue is anesthetized by local infiltration of 10 cc of 1% lidocaine with epinephrine, using a 25-gauge 5/8-inch needle. Immediately following injection into the subcutaneous tissues, the deeper tissues, including the pelvic floor and prostate apex, are anesthetized by injecting 15 cc lidocaine solution with approximately 8 passes of a 20-gauge 1.0-inch needle. Following subcutaneous and peri-apical lidocaine injections, the patient is brought to the simulator suite and placed in leg stirrups. The transrectal ultrasound (TRUS) probe is positioned to reproduce the planning images and a 3.5- or 6.0-inch, 22-gauge spinal needle is inserted into the peripheral planned needle tracks, monitored by TRUS. When the tips of the needles reach the prostatic base, about 1 cc of lidocaine solution is injected in the intraprostatic track, as the needle is slowly withdrawn, for a total volume of 15 cc. The implants are done with a Mick Applicator, inserting and loading groups of two to four needles, so that a maximum of only about four needles are in the patient at any one time. During the implant procedure, an additional 1 cc of lidocaine solution is injected into one or more needle tracks if the patient experiences substantial discomfort. The total dose of lidocaine is generally limited to 500 mg (50 ml of 1% solution).

RESULTS:

To date, we have implanted approximately 50 patients in our simulator suite, using local anesthesia. Patients' heart rate and diastolic blood pressure usually showed moderate changes, consistent with some discomfort. The time from first subcutaneous injection and completion of the source insertion ranged from 35 to 90 minutes. Serum lidocaine levels were below or at the low range of therapeutic. There has been only one instance of acute urinary retention in the patients treated so far, and no unplanned admissions to the hospital or need to reschedule a patient to be implanted under general or spinal anesthesia.

CONCLUSIONS:

The substitution of local anesthesia has facilitated rapid introduction of a high-volume brachytherapy program at an institution that previously had none, without requiring the allocation of significant operating room time. Although the patients reported here were implanted without conscious sedation, we are starting to try various sedatives and analgesics for patients who we anticipate will have substantial anxiety with the procedure.

[Acta Radiol.](#) 1999 Jul;40(4):436-9.

Ultrasound-guided fine needle aspiration biopsy of gall bladder malignancies.

[Venkataramu NK](#), [Sood BP](#), [Gupta S](#), [Gulati M](#), [Khandelwal N](#), [Suri S](#).

Source

Department of Radiodiagnosis, Postgraduate Institute of Medical Education & Research, Chandigarh, India.

Abstract

PURPOSE:

To establish the safety and efficacy of US-guided fine needle aspiration biopsy (FNAB) in gall bladder malignancies.

MATERIAL AND METHODS:

142 patients suspected to have gall bladder malignancies underwent FNAB under real-time US guidance. The most common sonographic appearances were a mass filling or replacing the gall bladder (n=98), focal or diffuse wall thickening (n=25) and intraluminal polypoidal mass (n=19). FNAB was performed with a 0.7-mm spinal needle using a free-hand technique.

RESULTS:

On initial FNAB, 115 patients were diagnosed to have malignancy. In the remaining 27 patients, aspirates on first FNAB showed either inflammatory pathology (n=14) or the sample was suspicious of malignancy (n=7), or the aspirates were non-representative (n=6). Of these 27 patients, 13 underwent repeat FNAB because of the high suspicion of malignancy and 12 of them showed malignancy. The FNAB diagnosis of inflammatory disease of 7 patients was confirmed on subsequent surgery and 8 patients were lost to follow-up. Thus, a total of 127/142 were diagnosed to have gall bladder malignancy. Adenocarcinoma was the most common malignancy (89.76%). No procedure-related complications were encountered.

CONCLUSION:

US-guided FNAB is a safe and accurate technique to diagnose gall bladder malignancy. Either a repeat FNAB or surgical biopsy is recommended when the suspicion of malignancy is high and the initial FNAB is negative.

[J Laparoendosc Adv Surg Tech A.](#) 1999 Feb;9(1):81-5.

A simple and inexpensive technique for closing trocar sites and grasping sutures.

[Earle DB](#).

Source

Department of Surgery, Baystate Medical Center, Springfield, Massachusetts, USA.

Abstract

Grasping sutures during laparoscopic surgery is useful in closing trocar sites, repairing ventral hernias, and securing abdominal wall bleeding. This can be a cumbersome task through small incisions. An 18 gauge spinal needle and the suture of choice for accomplishing the job at

hand can be used with a laparoscopic-assisted technique that is simple, inexpensive, and easy to learn. Surgeons performing laparoscopy should add this technique to their repertoire.

[Br J Oral Maxillofac Surg.](#) 1998 Oct;36(5):389-91.

Truncal anaesthesia of the maxillary nerve for outpatient surgically assisted rapid maxillary expansion.

[Robiony M](#), [Demitri V](#), [Costa F](#), [Politi M](#), [Cugini U](#).

Source

Department of Maxillofacial Surgery, University of Udine, Italy.

Abstract

We present our experience of transcutaneous truncal anaesthesia of the maxillary nerve in association with transmucosal anaesthesia of the sphenopalatine ganglion in surgically assisted rapid maxillary expansion. Twelve patients with a skeletal transverse discrepancy of the maxilla were treated in our department from 1994 to 1995. Maxillary transcutaneous nerve block was done with a Quincke 8 cm spinal needle together with transmucosal anaesthesia of the sphenopalatine ganglion. Mepivacaine without adrenaline and sodium bicarbonate 1/10 was used for truncal anaesthesia and lidocaine-prilocaine cream for transmucosal anaesthesia. A Le Fort I osteotomy, lateral nasal wall osteotomy, pterygomaxillary osteotomy, and a palatal osteotomy were done for all patients before the maxillary expansion. Total anaesthesia of the maxillary area facilitated the operations and appreciably reduced the amount of postoperative pain. The ease of achieving effective anaesthesia before and after operation and the absence of side-effects make this form of anaesthetic particularly useful in surgically assisted rapid maxillary expansion.

[Fetal Diagn Ther.](#) 1998 Mar-Apr;13(2):86-93.

Amniotic septostomy for the treatment of twin oligohydramnios-polyhydramnios sequence.

[Saade GR](#), [Belfort MA](#), [Berry DL](#), [Bui TH](#), [Montgomery LD](#), [Johnson A](#), [O'Day M](#), [Olson GL](#), [Lindholm H](#), [Garoff L](#), [Moise KJ Jr](#).

Source

Department of Obstetrics and Gynecology, The University of Texas Medical Branch, Galveston 77555-1062, USA. gsaade@marlin.utmb.edu

Abstract

OBJECTIVE:

To report our experience with intentional puncture of the intervening membrane ('septostomy') for the treatment of the twin oligohydramnios-polyhydramnios sequence (TOPS).

METHODS:

12 patients were diagnosed with TOPS based on ultrasonographic findings. A 20- to 22-gauge spinal needle was used to puncture the membrane between the twins without any attempt at amnioreduction in 9 patients, while the procedure was combined with amnioreductions in 3 patients.

RESULTS:

Gestational age was 23.1 +/- 3.3 weeks at the time of septostomy and 31.1 +/- 4.4 weeks at delivery. Rapid accumulation of fluid around the 'stuck' fetus occurred in all cases following a single procedure. Three of the 24 fetuses died in utero and 1 died on the fifth day of life, for a combined survival of 83.3%. In the survivors, the septostomy to delivery interval ranged between 0.6 and 13 weeks (mean +/- SD 8.3 +/- 4.8).

CONCLUSION:

Amniotic septostomy is a promising new method for the management of TOPS and is associated with survival rates that are better than, or comparable to, more invasive modalities. A multicenter trial comparing septostomy to other modalities is warranted.

[Clin Radiol.](#) 1998 Feb;53(2):116-9.

Transthoracic needle biopsy for suspected thoracic malignancy in elderly patients using CT guidance.

[Brown TS](#), [Kanthapillai P](#).

Source

Department of Diagnostic Imaging, Bradford Hospitals NHS Trust, Bradford Royal Infirmary, UK.

Abstract

There are few reports of transthoracic needle biopsy (TNB) in elderly (>70 years) patients although there is some evidence that age may be a risk factor in developing pneumothorax. We report our experience of 38 patients, age range 70-90 years, who underwent computed tomography (CT)-guided TNB for suspected malignancy of the chest, with particular reference to sensitivity and complication rate following the procedure. The biopsy was obtained using either a spinal needle or, if appropriate, a core of tissue was obtained using a cutting needle. The biopsy showed evidence of malignancy in 27 patients. Pneumothorax occurred in 10 of 40 biopsies. Two patients with pneumothorax required pleural drains; one was discharged the following day and the other required drainage for 3 days. Haemoptysis was not a problem but occurred as a transient postbiopsy event in three patients. In 26 of 40 (65%) episodes the patients were sent home within 24 h of the diagnostic procedure. It is thus quite possible to undertake the procedure on a day case basis. CT-guided TNB is a safe and reliable procedure in elderly patients with suspected chest malignancy and is well tolerated.

[Obstet Gynecol.](#) 1998 Jan;91(1):143-4.

Therapeutic amniocentesis using a vacuum bottle aspiration system.

[Dolinger MB](#), [Donnenfeld AE](#).

Source

Department of Obstetrics and Gynecology, Pennsylvania Hospital, Philadelphia 19107, USA.

Abstract

BACKGROUND:

Therapeutic amniocentesis has been performed traditionally by gravitational drainage or syringe aspiration. We describe a technique for relatively rapid, large-volume therapeutic amniocentesis using a negative-pressure vacuum bottle aspiration system.

TECHNIQUE:

The procedure involves insertion of a 20-gauge spinal needle into the amniotic cavity followed by connection to a 1-L vacuum bottle via noncollapsible tubing.

EXPERIENCE:

During a 5-year period, 86 therapeutic amniocenteses were performed on 26 women. The amniotic fluid removal rate was 89 mL/minute. There were three instances of transient preterm labor, three cases of ruptured membranes within a week of the procedure, and no cases of abruption, chorioamnionitis, or fetal distress.

CONCLUSION:

The vacuum bottle aspiration technique for therapeutic amniocentesis permits expeditious removal of large volumes of amniotic fluid safely and effectively.

[Br J Oral Maxillofac Surg.](#) 1997 Oct;35(5):328-33.

Blocks of the foramen rotundum and the oval foramen: a reappraisal of extraoral maxillary and mandibular nerve injections.

[Stajčić Z,](#) [Todorović L.](#)

Source

Clinic of Oral Surgery, Faculty of Stomatology, University of Beograd, Yugoslavia.

Abstract

OBJECTIVE:

To present our experience of regional anaesthesia with blocks of the foramen rotundum and the oval foramen.

DESIGN:

Open study.

SETTING:

University Hospital, Beograd, Yugoslavia.

SUBJECTS:

107 patients who underwent 58 maxillary and 49 mandibular nerve blocks.

INTERVENTIONS:

Injection of 2% lignocaine with adrenaline 1/80,000 with an 18 G venflon or 20 G spinal needle.

MAIN OUTCOME MEASURES:

Quality of anaesthesia and morbidity.

RESULTS:

49 of the 58 maxillary (84%) and 45 of the 49 mandibular (92%) nerve blocks were successful (no sensitivity to pinprick in the distribution of the injected nerve and a painless operation). There were 17 complications (26%), 8 in the maxillary and 9 in the mandibular group. All complications were minor and transient, and 6 could be attributed to anhydrous glycerol rather than the injection technique itself.

CONCLUSION:

Blocks of the foramen rotundum and the oval foramen achieve good regional anaesthesia in the maxillofacial region.

[Prenat Diagn.](#) 1997 Jun;17(6):501-4.

Prenatal diagnosis of haemoglobin Bart's disease by cordocentesis at 12-14 weeks' gestation.

[Lam YH](#), [Tang MH](#).

Source

Department of Obstetrics and Gynaecology, University of Hong Kong, Tsan Yuk Hospital, Hong Kong.

Abstract

Couples with alpha-thalassaemia-1 face a 25 per cent risk of having fetuses with haemoglobin (Hb) Bart's disease. Prenatal diagnosis is conventionally performed by DNA studies of chorionic villi or amniocytes obtained from chorionic villus biopsy or amniocentesis. DNA studies are expensive and time-consuming. We identified 11 affected pregnancies on abdominal ultrasound examination at 12-14 weeks when the placental thickness exceeded the mean plus 2 SD measurement for the gestational week and the cardiothoracic ratio was more than 0.5. Cordocentesis was then performed with a free hand technique. The procedures were successful in ten cases using a 26-gauge spinal needle with a 20-gauge introducer. Hb Bart's disease was confirmed in all cases by Hb electrophoresis. The procedure was unsuccessful in one case when a 22-gauge spinal needle was used. Hb study of fetal blood collected at abortion also confirmed Hb Bart's disease. In conclusion, ultrasound findings of concomitant placentomegaly and cardiomegaly at 12-14 weeks is highly specific of disease in pregnancies at risk of Hb Bart's disease. Cordocentesis and Hb study in pregnancies with these sonographic manifestations may be an alternative prenatal diagnostic approach. This diagnostic approach is of particular value in areas where resources for molecular studies are limited.

[Knee Surg Sports Traumatol Arthrosc.](#) 1997;5(2):72-6.

T-Fix anchor sutures for arthroscopic meniscal repair.

[Escalas F](#), [Quadras J](#), [Cáceres E](#), [Benaddi J](#).

Source

Department of Orthopaedic Surgery, Hospital de la Santa Creu i Sant Pau, Universitat Autònoma de Barcelona, Spain.

Abstract

The results of arthroscopically repaired meniscal tears with the T-Fix system in a short-term follow-up of 6 months was assessed in a non-comparative, prospective study. The T-Fix device consists of a short, rigid Delrin T attached to a braided, non-absorbable, polyester suture which is preloaded inside and deployed through a delivery (spinal) needle. The T grabs inside the tissue and provides an anchor for the suture. Twenty menisci in 20 patients (mean age 29 years) were repaired. Sports-related injuries were documented in 18 patients. In 15 patients, meniscus tears were repaired 6 months or more after injury. Half of the patients had

isolated meniscus injuries. Associated injuries included anterior cruciate ligament (ACL), medial or lateral collateral ligament ruptures. These were not treated at the time of meniscal surgery except for an ACL reconstruction. All tears were longitudinal and positioned mainly in the posterior horn of the medial meniscus. A total of 70 T-Fixes were used with an average of 3 per patient (range 2-7). Only 4 T-Fixes (6%) were unsuccessfully placed, and this occurred early on in the series in 4 patients. In 90% of the patients, the postoperative activity levels returned to preoperative levels, and the clinical symptoms had either resolved or were experienced at a higher level of activity. The T-Fix device was relatively easy to use and could be reliably placed in the meniscus. Postoperatively, there were no complications directly associated with the device. However, further studies are needed to confirm these results in a long-term follow-up in a larger patient population.

[J Urol.](#) 1996 Nov;156(5):1659-61.

Nerve block in prostate surgery.

[Tabet BG](#), [Levine S](#).

Source

Department of Anesthesia, St. Luke's Hospital, Bluefield, West Virginia 24701, USA.

Abstract

PURPOSE:

We describe a novel technique for anesthetizing the prostate, which should be used for patients at risk undergoing prostate surgery with general, spinal or epidural anesthesia.

MATERIALS AND METHODS:

Local anesthesia to the prostatic plexus supplemented by monitored anesthesia care was performed on 40 patients with outflow obstruction secondary to an enlarged prostate. Of the patients 34 underwent transurethral resection of the prostate, 5 underwent visual laser ablation and 1 underwent transurethral electrovaporization. A 20 gauge spinal needle was inserted via a suprapubic approach toward the base and apex of the prostate, and guided by the left index finger inserted into the rectum. Lidocaine was injected into the prerectal space. Bulging of the rectal wall caused by the amount of lidocaine injected was appreciated. Insertion into the proper area was essential for a good anesthetic result.

RESULTS:

Adequate anesthesia levels could be obtained without major complications. All but 1 patient with poor bladder compliance were rendered free of a Foley catheter. There were no deaths.

CONCLUSIONS:

This technique has definite advantages for patients who are at risk for prostate surgery with general or spinal anesthesia.

[J Laparoendosc Surg.](#) 1996 Mar;6 Suppl 1:S65-7.

Percutaneous access to the uterus for fetal surgery.

[VanderWall KJ](#), [Meuli M](#), [Szabo Z](#), [Bruch SW](#), [Kohl T](#), [Hoffman WY](#), [Adzick NS](#), [Harrison MR](#).

Source

Fetal Treatment Center, Department of Surgery, University of California, San Francisco, USA.

Abstract

In utero repair of selected life-threatening malformations in the human fetus is now a clinical reality, yet fetal surgery continues to pose significant risks to both the mother and the unborn child. Preterm labor is a major problem directly related to the large uterine incision required for fetal exposure. Using technology developed for laparoscopic surgery, we have devised instruments and techniques to perform fetal endoscopic surgery. We now report a percutaneous technique for direct endoscopic access to the uterus. Minimally invasive fetoscopic surgery may expand the indications for fetal surgery by decreasing fetal risks, facilitating intervention earlier in gestation, and reducing preterm labor. This technique was developed in 4 fetal lambs who underwent endoscopic intervention at 105-110 days gestation (term = 145 days). Under ultrasound guidance, a 20-gaugespinal needle was advanced through the maternal abdomen, uterus, and directly into the amniotic cavity. Warmed saline was infused through the needle to expand the amniotic cavity. Next, a 5-mm balloon-tipped trocar was placed percutaneously with ultrasound guidance into the amniotic cavity. A 5-mm laparoscope was introduced and under endoamniotic vision two more 5-mm trocars were percutaneously placed. In all four sheep a 5-mm trocar was placed percutaneously into the gravid uterus. The most difficult step was puncturing through the amniotic membranes, but the sharp tip of the trocar facilitated getting into the amniotic cavity. Excellent visualization of the fetus was obtained with minimal uterine trauma. We have developed a fetoscopic technique in sheep for percutaneous placement of trocars into the uterus using ultrasound guidance. This approach allowed excellent visualization of the fetus with significantly less uterine trauma than open fetal surgery and is an essential prerequisite for future fetal endoscopic interventions.

[AJR Am J Roentgenol.](#) 1996 Feb;166(2):415-8.

Percutaneous skeletal aspiration and core biopsy: complementary techniques.

[Schweitzer ME](#), [Gannon FH](#), [Deely DM](#), [O'Hara BJ](#), [Juneja V](#).

Source

Department of Radiology Thomas Jefferson University Hospital, Philadelphia, PA 19107, USA.

Abstract

OBJECTIVE:

Although core biopsy is the standard for percutaneous bone biopsy in most other organs aspiration biopsy is frequently performed. We prospectively evaluated 138 patients with skeletal lesions, performing both core and aspiration biopsies to determine if these techniques have a complementary role.

SUBJECTS AND METHODS:

Over a 2-year period, 138 consecutive patients underwent skeletal biopsy. In each patient, two or three histologic cores were obtained percutaneously using standard techniques followed by a single aspiration pass with a 22-gauge spinal needle and 20 cc of negative pressure. Histologic and cytologic evaluations of cores and aspirates were interpreted according to usual pathologic and cytologic criteria. Results were classified as matches (positive or negative), mismatches (aspiration or core only positive), mismatches (either aspiration or core more specific), insufficient samples, inaccurate diagnoses, and both false-negative.

RESULTS:

Twenty-eight patients had specific neoplasms diagnosed on both core and aspiration biopsy, and 40 patients were negative on both. The diagnosis was made only by core in 17 and only by aspiration in 11. Core was more specific in 11, and aspiration was more specific in seven. There were three insufficient cores and 18 insufficient aspiration specimens. One false-negative result was seen by both techniques, and the cytology of two aspiration biopsies was misinterpreted.

CONCLUSION:

A complementary role exists for aspiration and core skeletal biopsy, and we suggest both should be routinely performed.

[J Formos Med Assoc.](#) 1995 Dec;94 Suppl 2:S137-43.

[Diagnostic value of ultrasonically guided lung aspiration in pneumonia].

[Article in Chinese]

[Chen CH](#), [Lai CL](#), [Chiu MH](#), [Liu RD](#), [Shih JF](#), [Lee YC](#), [Perng RP](#).

Source

Chest Department, Veterans General Hospital, Taipei, Taiwan, R.O.C.

Abstract

To determine the diagnostic value of ultrasonic lung aspiration for patients with pneumonia, 60 patients with a tentative diagnosis of pneumonia were included in this study. After recording ultrasonographic findings, lung aspiration was done with a spinal needle and aspirated specimens were sent for Papanicolaou, May-Giemsa, acid fast, and Gram stains. The remaining specimens were sent for bacterial, mycobacterial and fungal culture. Twelve patients were excluded from the study because of the final diagnosis of non-infectious pulmonary diseases. In 28 cases of bacterial pneumonia, the diagnostic sensitivity of smear was 50% and culture 61%. The overall sensitivity of needle aspiration and culture was 71%. In 11 cases of bacterial pneumonia with a negative bacterial culture result, 7 cases were afebrile at the time of examination. To increase the diagnostic yield, needle aspiration should be performed at the acute stage of bacterial pneumonia. In 15 cases of pulmonary tuberculosis, the diagnostic rate of acid-fast smear was 47% and mycobacterial culture was 46%. The overall sensitivity of smear and culture was 60%. The diagnostic rate of needle biopsy was 75% and cytologic examination was 77%. Needle biopsy and cytologic examination enhanced the diagnostic rate of sputum-negative pulmonary tuberculosis. Cryptococcosis was documented by smear and needle biopsy in all of the five cases of cryptococcosis. Cryptococcosis is not easily detected by routine cytologic examination, and clinical information is still necessary to enhance the diagnostic rate. Our results show that ultrasonically guided lung aspiration is a technique with a high diagnostic yield and a low complication rate for various types of pneumonia. It is especially useful for patients without satisfactory clinical responses or without accurate microbiologic diagnosis.

[J Gastroenterol Hepatol.](#) 1995 Nov-Dec;10(6):662-5.

Ultrasound-guided fine needle aspiration biopsy of portal vein thrombosis in liver cirrhosis: results in 15 patients.

[De Sio I](#), [Castellano L](#), [Calandra M](#), [Romano M](#), [Persico M](#), [Del Vecchio-Blanco C](#).

Source

Dipartimento di Internistica Clinica e Sperimentale F. Magrassi-Cattedra di Gastroenterologia, II Ateneo di Napoli Medical School, Italy.

Abstract

Between 1988 and 1992 ultrasound-guided fine needle aspiration biopsies of thromboses in the main branches of the portal vein were carried out in 15 patients with liver cirrhosis. The aims of the study were to evaluate the usefulness, feasibility and diagnostic accuracy of this procedure in cirrhotics with known or suspected hepatocellular carcinoma. The procedure was carried out only in patients with a platelet count $>$ or $=$ 40,000/microL and prothrombin activity $>$ or $=$ 40%. A single pass, with a 22 gauge spinal needle, was performed in the portal vein lumen. Diagnosis of the aetiology of the portal vein thrombosis was obtained in all 15 cases. In 12 cases, a cytological diagnosis of hepatocellular carcinoma was made. In one case, the neoplastic cells aspirated were compatible with adenocarcinoma, and a subsequent colonoscopy confirmed the presence of colonic cancer. The material aspirated was compatible with chemically-induced thrombosis in one patient who had undergone several percutaneous ethanol injection sessions for treatment of hepatocellular carcinoma, and in the last case only blood was aspirated, thus ruling out the coexistence of hepatic cancer. We conclude that fine needle aspiration biopsy of portal vein thrombosis is a feasible, low risk procedure that facilitates the diagnosis of hepatocellular carcinoma when fine needle biopsy of focal liver lesions fails. Fine needle aspiration biopsy of portal vein thrombosis is also useful in excluding neoplastic aetiology of portal vein thrombosis.

[Hepatology](#). 1995 May;21(5):1303-7.

Diagnostic value of fine-needle puncture of the gallbladder: side effects, safety, and prognostic value.

[Tudyka J](#), [Kratzer W](#), [Kuhn K](#), [Janowitz P](#), [Wechsler JG](#), [Adler G](#).

Source

Krankenhaus der Barmherzigen Brüder, Department of Internal Medicine, Munich, Germany.

Abstract

Bile sampling without the risk of contamination by pancreatic and duodenal secretions and avoiding unpredictable influences of general anesthesia during biliary surgery on biliary analytics are feasible with percutaneous puncture of the gallbladder. In 207 patients with gallstones, gallbladder puncture was performed under local anesthesia with a 22-gauge spinal needle under continuous real-time ultrasound guidance. Bile samples were investigated for biliary lipids and nucleation time. Complete aspiration of gallbladder bile could be achieved in all patients without complications such as bleeding, bile leak, or inflammation. Of these patients, 11.6% reported mild abdominal problems, 3.4% required analgetics, and in 1.0% biliary colics were observed. Elective cholecystectomy was performed in 1 patient. Of the bile samples, 10.1% were contaminated with bactobilia. Biliary lipids, cholesterol saturation index (CSI), total lipid concentration (TLC), and bacteriological contamination were independent of gallstone number, whereas patients with solitary gallbladder stones exhibited a significantly longer nucleation time (NT) in comparison with those with multiple stones. In patients with gallstones, fine-needle puncture of the gallbladder represents an important diagnostic procedure and can be performed within minutes without major side effects if performed by an experienced sonographer.

[Obstet Gynecol.](#) 1995 Feb;85(2):265-8.

A prospective series of unruptured ectopic pregnancies treated by tubal injection with hyperosmolar glucose.

[Yeko TR](#), [Mayer JC](#), [Parsons AK](#), [Maroulis GB](#).

Source

Department of Obstetrics and Gynecology, University of South Florida College of Medicine, Tampa.

Abstract

OBJECTIVE:

To evaluate the safety and efficacy of hyperosmolar glucose injection in select unruptured tubal gestations with hCG levels less than 2500 mIU/mL.

METHODS:

In this prospective series, 16 patients with an hCG titer less than 2500 mIU/mL and an unruptured ectopic pregnancy were treated by tubal injection with hyperosmolar (50%) glucose. Hyperosmolar glucose was injected transabdominally into the antimesenteric site of the tubal pregnancy, using a 20-gauge spinal needle. The main outcome measures evaluated were duration of surgery, success rate, time to resolution, and follow-up tubal patency rates.

RESULTS:

Ninety-four percent (15) of the subjects were treated successfully with a median time to resolution of 24 days (range 5-78). The one treatment failure required methotrexate because of rising hCG titers and worsening pain 4 days after the patient was treated with hyperosmolar glucose. The mean (+/- standard error) duration of surgery was 45 +/- 6 minutes. So far, all ten patients undergoing postoperative hysterosalpingograms have demonstrated tubal patency in the treated tube.

CONCLUSION:

Laparoscopic injection with hyperosmolar glucose is an effective, systemically nontoxic alternative treatment for select unruptured ectopic pregnancies (hCG less than 2500 mIU/mL) that achieves tubal patency rates comparable to other conservative medical and surgical treatments.

[Skull Base Surg.](#) 1995;5(3):131-6.

Computed tomography-guided aspirations of parapharyngeal and skull base masses.

[Yousem DM](#), [Sack MJ](#), [Hayden RE](#), [Weinstein GS](#).

Abstract

Computed tomography (CT)-guided aspirations of 22 parapharyngeal and skull base masses were performed via an oblique approach between the ascending ramus of the mandible and the pterygoid plates. A 22 g spinal needle was inserted through an 18 g introducer needle for sampling. Diagnostic specimens were obtained in 20 cases including six salivary gland neoplasms, five squamous cell carcinomas, five infections, and two cysts. On average, 2.8 passes into the mass were required although fewer were necessary to diagnose neoplasms (2.0 passes). No complications occurred. In this series, 100% of neoplasms were detected cytologically and there were no false-negative results. In two cases (9.1%) there was a

discrepancy between the initial aspiration report and the final histologic diagnosis. CT-guided aspirations of skull base masses are a viable alternative to what would otherwise be a difficult surgical approach for biopsy. Diagnostic samples are obtained in 90.9% (20 of 22) with an accuracy of 90% (18 of 20).

[Prenat Diagn.](#) 1995 Jan;15(1):17-9.

Genetic amniocentesis in biamniotic twin pregnancies by a single transabdominal insertion of the needle.

[Buscaglia M](#), [Ghisoni L](#), [Bellotti M](#), [Marconi AM](#), [Zamperini P](#), [Stripparo L](#), [Molinari A](#), [Grimoldi MG](#), [Rossella F](#).

Source

Department of Obstetrics and Gynaecology, I.S.B.M., S. Paolo Hospital, University of Milan, Italy.

Abstract

We present a technique to aspirate amniotic fluid from both sacs in biamniotic twin pregnancies using a single abdominal insertion with a spinal needle. It was successful in 48 out of 55 cases of biamniotic twin pregnancies referred to our perinatal unit between 1985 and 1994. The single insertion technique was used when the inter-amniotic membrane was clearly evident and two separate free amniotic fluid pools could be reached by the operator with a single puncture. An adequate amount of amniotic fluid was sampled from both sacs to make a cytogenetic diagnosis in all cases. There were four fetuses with trisomy 21 in three twin pregnancies. In two cases, only one twin was affected whilst the co-twin was normal, so that a selective feticide was performed. No miscarriages due to genetic amniocentesis were reported. After 1990, all genetic amniocenteses in biamniotic twin pregnancies (except for one case due to late booking) were performed between 14 and 15 weeks of gestation and with all cases except one, it was possible to sample both twins by a single puncture. We suggest that early amniocentesis (14-15 weeks) by a single abdominal puncture could be a reliable and safe alternative to first-trimester chorionic villus sampling in twin pregnancies.

[Acta Radiol.](#) 1994 Mar;35(2):138-42.

Percutaneous ethanol injection therapy of adenomatous hyperplastic nodules in cirrhotic liver disease.

[Lencioni R](#), [Caramella D](#), [Bartolozzi C](#), [Mazzeo S](#), [Di Coscio G](#).

Source

Department of Radiology, University of Pisa, Italy.

Abstract

Adenomatous hyperplastic nodules (AHNs) in cirrhotic liver are considered a precancerous condition which may lead to hepatocellular carcinoma (HCC). In this study, we treated a total of 23 AHNs in 15 patients with percutaneous ethanol injection (PEI). The treatment included 6 to 8 PEIs, performed on an out-patient basis under sonographic guidance. A 22 G (0.7 mm) spinal needle was used. The total amount of alcohol delivered into each lesion was 8 to 25 ml (mean 14.9 ml). At the end of treatment, complete necrosis of the nodule was proved in all cases by multiple fine-needle biopsies and confirmed by CT and MR findings. During

follow-up (9-41 months, mean 24 months) no recurrences were demonstrated. However, HCC occurred elsewhere in the liver of 4 patients and additional AHNs were detected in 2 patients. Thus, PEI proved able to cause complete ablation of AHNs, presumably preventing their malignant transformation. However, patients with AHN remain at high risk for developing HCC.

[Reg Anesth.](#) 1993 Nov-Dec;18(6):343-50.

Medial branch blocks are specific for the diagnosis of cervical zygapophyseal joint pain.

[Barnsley L](#), [Bogduk N](#).

Source

Cervical Spine Research Unit, University of Newcastle, Waratah, New South Wales, Australia.

Abstract

BACKGROUND AND OBJECTIVES:

To determine the specificity of cervical medial branch blocks for the diagnosis of cervical zygapophyseal joint pain by ascertaining the disposition of the local anesthetic after injection of the medial branches of the cervical dorsal rami.

METHODS:

Sixteen consecutive patients with chronic neck pain from motor vehicle accidents underwent cervical medial branch blocks. A 22-gauge, 90-mm spinal needle was placed onto the target nerve under image-intensifier guidance. Immediately after each target nerve had been infiltrated with 0.5 ml of local anesthetic, 0.5 ml of contrast medium was injected to map the spread of injectate. Radiographs were recorded to document the pattern of spread.

RESULTS:

Twenty-five injections of local anesthetic and contrast medium were performed. Contrast medium dispersed in characteristic patterns at all vertebral levels and always incorporated at least 5 mm of the perceived course of the target nerve. There was never any spread to the ventral ramus, beyond the medial fibers of semispinalis capitis or to the adjacent medial branches. No other single structure was consistently within the field of the contrast. Eleven patients obtained complete or definite relief of their pain, which could only be attributed to anesthetization of the zygapophyseal joint innervated by the nerves blocked.

CONCLUSIONS:

Local anesthetic blocks of the cervical medial branches are a specific test for the diagnosis of cervical zygapophyseal joint pain. The local anesthetic always reaches the target nerve and does not affect any other diagnostically important structures.

[Pediatr Pathol.](#) 1993 Sep-Oct;13(5):699-705.

In situ fixation of the neonatal brain and spinal cord.

[Bass T](#), [Bergevin MA](#), [Werner AL](#), [Liuzzi FJ](#), [Scott DE](#).

Source

Division of Neonatology, Children's Hospital of the Kings Daughters, Eastern Virginia Medical School, Norfolk 23507.

Abstract

A delay in the autopsy can result in significant tissue autolysis, especially in the central nervous system. We have developed a rapid technique of in situ fixation that preserves central nervous system tissues until the formal autopsy can be performed. Through the lateral margin of the anterior fontanelle, Zamboni's solution is injected percutaneously into the lateral ventricles and allowed to exit via an intrathecal spinal needle. The choice of fixative allows a wide array of postmortem studies to be done.

[Eur J Surg.](#) 1993 Jun-Jul;159(6-7):339-41.

Progressive preoperative pneumoperitoneum in the repair of large abdominal hernias.

[Coelho JC](#), [Brenner AS](#), [Freitas AT](#), [Campos AC](#), [Wiederkehr JC](#).

Source

Department of Surgery of the Federal University of Paraná, Curitiba, Brazil.

Abstract

OBJECTIVE:

To present our experience of progressive preoperative pneumoperitoneum in the preparation of patients for repair of large hernias of the abdominal wall.

DESIGN:

Prospective selected series.

SETTING:

A university hospital and a district hospital.

SUBJECTS:

36 Patients of the 252 who presented for abdominal hernia repair between January 1977 and April 1992.

INTERVENTIONS:

Air was insufflated into the peritoneal cavity through a 19 gauge spinal needle, and between 500 and 2000 ml was usually injected at the first session. Amounts were gradually increased daily or every other day for a period of 6-15 days; the total amount insufflated ranged from 4500-18,500 (mean 7700) ml.

MAIN OUTCOME MEASURES:

Whether the hernia could be repaired directly without recourse to polypropylene mesh, complications of pneumoperitoneum, and recurrence rate.

RESULTS:

In one patient air was insufflated into the colon, one developed temporary but severe respiratory distress, and 4 developed moderate subcutaneous emphysema. 30 hernias were repaired directly, and 6 required polypropylene mesh. There were three wound infections (two after direct repair), and two recurrences (both after direct repair). Mean length of follow up was 10 months (range 1-48).

CONCLUSION:

Progressive preoperative pneumoperitoneum allows direct repair of some large abdominal hernias with a low recurrence rate, and few complications.

[Cah Anesthesiol.](#) 1993;41(3):235-6.

[The trans-sacral route. Can the technique be simplified?].

[Article in French]

[Saint-Maurice C](#), [Landais A](#), [Othmani H](#), [Khalloufi M](#).

Source

Département d'Anesthésie-Réanimation, Hôpital Saint-Vincent-de-Paul, Paris.

Abstract

Described by P. Busoni in 1988, the trans-sacral route is now often used in paediatric anaesthesia. It seems to the authors easier to search the lost of resistance only with a spinal needle without a syringe. Authors used bupivacaine 0.20% with epinephrine. Four failures have been observed, two intrathecal entering and impossibility to perform the trans-sacral block. In recovery room, not any child needed analgesic treatment. In ward, the results of 46 children only could be analyzed.

[Minerva Anesthesiol.](#) 1992 Nov;58(11):1227-30.

[Brachial plexus block by the axillary route. Cannulation of the neurovascular sheath with a G22 spinal needle. Our experience with 100 cases].

[Article in Italian]

[Basile PG](#), [De Vita M](#).

Source

Ospedale Civile di Soverato, Regione Calabria, USL n. 20.

Abstract

The aim of this study was to evaluate the utility of the brachial plexus block using an axillary route employing the technique in which the needle is inserted into the sheath at an angle parallel to the neuro-vascular bundle with a sole modification: using a G22 spinal needle and without evoking paresthesia. The results obtained show that this method ensures an improved and more widespread analgesia. The flexibility and small size of the G22 spinal needle allow traumas to the axillary guaina and brachial plexus to be reduced to a minimum. In addition its length enables the anesthetic solution to be diffused around the first rib, including the axillary and musculo-cutaneous nerves, thus ensuring e total sensory and motor block of the upper limb.

[Radiology.](#) 1992 Oct;185(1):263-8.

Fine-needle aspiration biopsy of abdominal lesions: diagnostic yield for different needle tip configurations.

[Dähnert WF](#), [Hoagland MH](#), [Hamper UM](#), [Erozan YS](#), [Peirce JC](#).

Source

Department of Radiology, Good Samaritan Regional Medical Center, Phoenix, AZ 85006.

Abstract

Four fine-needle aspiration biopsy needles with different tip configurations were used in 133 patients with abdominal lesions. The 20-gauge needles were used in random sequence by several physicians. The specimen from each of the 522 needle passes was evaluated by two cytopathologists for adequacy to render a diagnosis and for the presence of cell block material. The Franseen needle produced a 16% and 9% better yield for diagnostic material than did the cut biopsy and spinal needles (P less than .05), respectively. The Westcott needle was better than the cut biopsy needle by 13%, and the spinal needle produced an 11% better yield than did the cut biopsy needle. Differences did not exist in liver biopsies but were present in pancreatic biopsies. The spinal needle was the least successful in yielding cell block material. Use of the cut biopsy needle resulted in the largest proportion of inadequate specimens, except its yield in cell blocks in the liver was 25% higher than that of the Westcott needle. The authors conclude that not all unusual designs for 20-gauge needle tips render results superior to those of the simple spinal needle.

[Clin Radiol.](#) 1992 Mar;45(3):185-6.

Ultrasound-guided fine needle aspiration cytology of carcinoma involving the intra-abdominal oesophagus.

[Das KM](#), [Kochhar R](#), [Gupta NM](#), [Rajwanshi A](#), [Suri S](#).

Source

Department of Radiodiagnosis, Post Graduate Institute of Medical Education and Research, Chandigarh, India.

Abstract

Ultrasound-guided fine needle aspiration cytology (FNAC) of carcinoma of the intra-abdominal oesophagus was attempted on 21 patients with a 21 G spinal needle using a percutaneous anterior epigastric approach. The results were compared with those of endoscopic biopsy and brush cytology. The ultrasound-guided FNAC had a positive yield in 20/21 (95.2%) compared with 18/21 (85.7%) for endoscopic biopsy and 18/21 (85.7%) for brush cytology (P greater than 0.59). The combination of US-guided FNAC with endoscopic biopsy and the brush cytology achieved a positive yield in 21/21 (100%) whereas combining endoscopic biopsy and brush cytology produced a positive yield of 19/21 (90.5%). Two patients developed temporary epigastric pain. We recommend US-guided FNAC as a safe and effective technique that can be used alone or as an adjunct to endoscopic procedures for the diagnosis of carcinoma of the intra-abdominal oesophagus.

[Acta Obstet Gynecol Scand.](#) 1992 Feb;71(2):124-5.

Prepartum transabdominal amnio-infusion for severe oligohydramnios.

[Mandelbrot L](#), [Dommergues M](#), [Dumez Y](#).

Source

Port Royal University Clinic of Obstetrics and Gynecology, Paris, France.

Abstract

Transabdominal amnio-infusion preceding labor induction was evaluated as a means of avoiding fetal distress and cesarean delivery in patients with oligohydramnios. A preliminary study was performed in 8 consecutive term or post-term pregnancies complicated by severe oligohydramnios (amniotic fluid index less than or equal to 1 cm) with unripe cervixes (Bishop's score less than or equal to 3). Warm saline was injected through a spinal needle under ultrasound control. Vaginal delivery occurred in 7 cases; cesarean section was performed in one patient for failure to progress. There was no meconium aspiration and no sign of fetal distress.

[J Crit Illn.](#) 1992 Feb;7(2):284-92.

The technique of percutaneous renal biopsy. How to minimize risk while ensuring adequate tissue sampling.

[Griffin KA.](#)

Source

Loyola University Medical Center, Maywood, Illinois.

Abstract

Percutaneous renal biopsy is useful in diagnosing a variety of kidney disorders, as well as certain systemic diseases with renal and/or nonrenal manifestations. The procedure is performed while the kidney is viewed by continuous ultrasonographic imaging. The kidney is first located with a spinal needle and the area is anesthetized. The biopsy needle is then inserted and advanced toward the capsule. When the capsule is pierced, the trochar is advanced into the renal cortex. The sheath is lowered, encompassing the cutting edge and the core biopsy sample. Complications, although rare, may include the creation of an arteriovenous malformation and laceration of the kidney or other intra-abdominal organ; close monitoring after the procedure is therefore required.

[Schweiz Med Wochenschr.](#) 1991 Nov 16;121(46):1686-95.

[Percutaneous ethanol injection of malignant liver tumors under ultrasonographic guidance].

[Article in French]

[Schönenberg P](#), [Bastid C](#), [Sahel J](#).

Source

Division de gastroentérologie, Hôpital cantonal universitaire, Genève.

Abstract

16 patients (14 males, 2 females, mean age: 59.2 years) underwent sonographic-guided ethanol injections as treatment for 23 hepatocellular carcinomas (HCC) complicating cirrhosis. All lesions were pathologically proven by sonographic-guided cytology. Tumor sizes ranged from 9 to 66 mm. Sterile 96% alcohol was injected with a 17.7 cm-long 22 gauge spinal needle at one week intervals. At each session, 8-50 ml was injected depending on the diameter of the tumor. We regarded as a "success" the negativation of the cytologies one, two and three months after the end of the treatment associated with normalization of alpha-fetoprotein levels and typical echographic and tomodesitometric changes. No serious

complication was associated with the procedure. In the "Child A" group¹, 6 of 7 tumors have been successfully treated, the largest measuring 66 mm. The seventh lesion is currently being treated. In the "Child B" group¹ 3 of 6 lesions have been successfully treated. No success has been obtained in the "Child C" group. Volumes of alcohol greater than previously reported may be useful for lesions larger than 40 mm. Percutaneous alcohol injections can be considered as an alternative to surgery even for lesions larger than 50 mm. Among 4 patients presenting with 11 liver metastases of colic and gastric adenocarcinoma and 1 patient with a small bowel carcinoid tumor, one remission with a follow-up of 5 months was observed.

[Minerva Endocrinol.](#) 1991 Oct-Dec;16(4):163-70.

[Percutaneous treatment under echographic guidance of toxic thyroid nodules. Technique for its performance and preliminary results].

[Article in Italian]

[Papini E](#), [Panunzi C](#), [Petrucci L](#), [Picardi R](#), [Pacella CM](#), [Bizzarri G](#), [Fabbrini R](#), [Pisicchio G](#), [Favella A](#), [Todino M](#), et al.

Source

Divisione di Medicina, Ospedale Regina Apostolorum, Albano Laziale, Roma.

Abstract

Six patients affected by toxic thyroid nodules (Plummer disease) were treated by percutaneous ethanol injection (PEI). Treatment was performed injecting under ultrasound guidance 2-4 mL of 95% sterile ethyl alcohol through a spinal needle (22 gauge, 75 mm length). Treatment was performed once-twice weekly and repeated as an outpatient procedure 4-6 times. PEI induced clinical improvement and hormonal control by the end of the treatment (one month) and no complications took place. After PEI all hyperfunctioning thyroid nodules became smaller at clinical and ultrasound examination. Three months after PEI hot areas appeared cold at ^{99m}Tc and ¹³¹I scintiscan. Serum levels of FT₃, FT₄, AbT, AbM, TG reached the normal range and serum TSH levels were significantly increased and responsive to TRH stimulation.

[Ann Gastroenterol Hepatol \(Paris\).](#) 1991 Jun;27(4):163-6.

[Percutaneous alcoholization of the celiac plexus under echographic guidance: an alternative to splanchnicectomy? Study of 21 cases].

[Article in French]

[Bastid C](#), [Schönenberg P](#), [Guedes J](#), [Sahel J](#).

Source

Service d'Hépatogastroentérologie, Hôpital Sainte-Marguerite, Marseille.

Abstract

Celiac plexus block is usually performed under fluoroscopic or tomodensitometric guidance. We report on a new procedure using sonographic guidance. The patient lies in supine position. We use a real-time sonograph (Kontron Sigma 1 AC) with a 3.5 MHz probe. On a

transverse plane, the celiac axis is localized emerging from aorta. After local anesthesia, the tip of the spinal needle (177 mm, 22 G) is placed close to aorta (about 5 mm) on both sides. 10 to 15 ml of 1 per cent lidocaine then 10 to 15 ml of absolute alcohol are injected on each side. 21 patients (10 males, 11 females, mean age: 61) underwent the procedure. They presented with cancer of the pancreas in 14 cases, metastatic nodes in 3 cases, cholangiocarcinoma in 2 cases and chronic calcifying pancreatitis (CCP) in 2 cases. No pain relief occurred in 3 patients (14 per cent). On of those presented with CCP but the endoscopic cystic diversion of a small cyst was successful to eradicate pain. Partial pain relief occurred in 5 cases (24 per cent). Total pain relief was obtained in 13 cases (62 per cent). No complication related to the treatment was observed. Sonography is a simple and safe method of guidance to perform alcohol block of the celiac plexus. The anterior approach may prevent neurologic complications related to other methods of guidance.

[J Am Vet Med Assoc.](#) 1991 Feb 15;198(4):660-2.

Percutaneous drainage of an abscess in the lateral neck region of a horse.

[Baxter GM](#), [Humphries GB Jr.](#)

Source

Department of Large Animal Medicine, College of Veterinary Medicine, University of Georgia, Athens 30602.

Abstract

A large abscess in the lateral neck region of a horse was treated with percutaneous drainage. The abscess was localized with ultrasonography and aspirated by use of a 7.7-cm spinal needle. A stainless-steel guide wire was passed through the needle, and tissue dilators were used to enlarge the percutaneous hole. A multiperforated polyvinylchloride catheter that was placed within the abscess cavity permitted aspiration and lavage of the abscess. The abscess resolved over the next 10 days with no complications. Percutaneous abscess drainage is commonly performed in people and may have application in veterinary medicine.

[Rev Chil Obstet Ginecol.](#) 1991;56(1):16-9.

[Direct intraperitoneal insemination. Authors' experience].

[Article in Spanish]

[Anselmo J](#), [Gutiérrez A](#), [Canales S](#).

Source

CENTROMED, Viña del Mar, Chile.

Abstract

We present our experience with the method of Direct Intraperitoneal Insemination (DIPI) in cases of infertility during 56 cycles with ovarian stimulation in 15 women 53.3% of our cases are primary sterility cases. The principal indication for DIPI was male factor (six cases), endometriosis three cases, cervical hostility, three cases and compound cases the other ones. The average age was 33.7% years. Always we used the induction of ovulation according to the protocol of Frydman with clinical monitorization. The seminal fluid was treated with the swim-up method and was placed in the pelvic peritoneum with a spinal

needle by direct transvaginal puncture, during the ovulatory period. We have obtained five pregnancies (33.3%) one of them ectopic (6.66). We have been successful in all cases of cervical hostility and in one case of compound etiology. There are no complications in this series with DIPI. It is discussed the place of DIPI among the technology of assisted fertilization.

[Lung](#). 1991;169(5):285-9.

Percutaneous transthoracic needle biopsies in the rapid diagnosis of pulmonary tuberculosis.

[Yew WW](#), [Kwan SY](#), [Wong PC](#), [Fu KH](#).

Source

Tuberculosis and Chest Unit, Grantham Hospital, Hong Kong.

Abstract

From May, 1987, to December, 1990, 173 percutaneous transthoracic needle biopsies (PTNB) using a 19-gauge spinal needle under uniplane fluoroscopic guidance were performed in 160 patients. Thirty-one patients had a final diagnosis of pulmonary tuberculosis. These patients with tuberculosis underwent a total of 35 biopsies. Twenty of 35 (57%) had definite histologic features of tuberculosis with stainable acid-fast bacilli, 4/35 (11.5%) had granulomatous or caseous lesion consistent with tuberculosis, and 11/35 had nonspecific inflammatory changes. When results were matched with the sputum culture results, 15/35 specimens (43%) provided the exclusive means of diagnosis of tuberculosis. Five of 35 (14%) patients developed postbiopsy pneumothoraces. The overall acceptance by patients was good. This report indicates the potential usefulness of PTNB in the rapid diagnosis of selected cases of suspected pulmonary tuberculosis. The yield was comparable to fiberoptic bronchoscopy, currently commonly used in the diagnosis of pulmonary mycobacterial disease. The procedure was noted for its simplicity.

[AJR Am J Roentgenol](#). 1990 Dec;155(6):1217-9.

Nonaspiration fine-needle cytology of the liver: a new technique for obtaining diagnostic samples.

[Fagelman D](#), [Chess Q](#).

Source

Great Neck Imaging, NY 11023.

Abstract

We studied a new method of obtaining diagnostic cytology samples from the liver that differs from fine-needle aspiration cytology in that no suction is used to obtain the sample. This method is simpler to perform than traditional aspiration biopsy and yields concentrated cell smears that are easier to interpret. The sample enters the needle because of capillary action, a physical property of fluid that causes it to flow into the lumen of a narrow channel. This nonaspiration technique was used in 40 consecutive patients undergoing fine-needle biopsy of mass lesions of the liver. A 22-gauge spinal needle was used in all procedures. The cytology smears obtained were prepared, stained, and interpreted by the same methods used for conventional fine-needle cytology specimens. Specific diagnoses were rendered in 36

patients (90%) and in 32 (94%) of those patients with malignant tumors. An average of 1.7 needle passes (range, 1-4) was needed per patient. We conclude that the results from nonaspiration fine-needle cytology of the liver are as good as those from conventional aspiration technique, and the nonaspiration technique is easier to perform and results in smears that are easier to interpret.

[Geburtshilfe Frauenheilkd.](#) 1990 Jul;50(7):533-7.

[Laparoscopic treatment of tubal pregnancy with prostaglandins].

[Article in German]

[Deckardt R](#), [Jänicke F](#), [Kuhn W](#), [Zhang GH](#).

Source

Frauenklinik und Poliklinik der Technischen Universität München, Klinikum rechts der Isar.

Abstract

Fifteen patients with laparoscopically diagnosed tubal pregnancy and constant or rising plasma beta-hCG levels were treated with prostaglandin F2 alpha and prostaglandin E2. Prostaglandin F2 alpha (5 mgms diluted in 10 cc of isotonic sodium solution) was injected transabdominally with a 22 gauge spinal needle during laparoscopy into the Fallopian tube. Prostaglandin E2 (500 micrograms ms) was given intramuscularly during three consecutive postoperative days. The treatment was defined as successful if plasma beta-hCG levels declined below the lower limit of detection and no further intervention other than prostaglandin application was required. The treatment was successful in eight patients. Six patients underwent laparotomy and salpingotomy because of rising beta-hCG levels. None of the treated patients displayed any adverse reactions following prostaglandin F2 alpha application. One patient underwent explorative laparotomy during the second postoperative day because of lower abdominal pain. During operation, no pathological change could be found. This patient was excluded from the study. In the group treated successfully (n = 8) seven out of eight patients had beta-hCG levels below 2500 mIU/ml preoperatively. In the unsuccessfully treated group (n = 6), four out of six patients had beta-hCG levels above 2500 mIU/ml preoperatively. Mean duration of beta-hCG decline to 10 percent of the maximum preoperative value was 15.8 +/- 8.64 days (mean +/- S.D.). Postoperatively, hysterosalpingography was performed in six out of eight successfully treated patients after three menstrual cycles (one patient had an intrauterine pregnancy, one patient refused written consent). The Fallopian tubes were patent bilaterally in all six patients.

[Ma Zui Xue Za Zhi.](#) 1990 Mar;28(1):31-4.

Intrauterine neuromuscular blockade in fetus.

[Fan SZ](#), [Huang FY](#), [Lin SY](#), [Wang YP](#), [Hsieh FJ](#).

Source

Department of Anesthesiology, National Taiwan University Hospital.

Abstract

Antenatal intrauterine fetal therapy has now become the target of numerous invasive diagnostic and therapeutic maneuvers. Fetal motion during intrauterine fetal therapy not only

makes these procedures technically more difficult but also increases the likelihood of trauma to the umbilical vessels and the fetus. Combination of high doses of sedatives, tranquilizers, and narcotics rarely results in adequate suppression of fetal movement. Such medication puts the mother at risk of respiratory depression, regurgitation and aspiration. The use of pancuronium or atracurium to temporarily arrest fetal movement in ten fetus is reported. After an initial ultrasound assessment of fetal lie, placental location, and umbilical cord insertion site, the fetal weight was calculated by the ultrasound parameters of biparietal diameter and abdominal circumference. Under ultrasound guidance, we injected pancuronium 0.15 mg/kg or atracurium 1.0 mg/kg using a 23-gauge spinal needle into the fetal gluteal muscle. Short-term paralysis of the fetus was induced in all cases. Fetal movement stopped by sonographic observation within 5.8 +/- 2.3 min in the pancuronium group and 4.7 +/- 1.8 min in the atracurium group. Fetal movements returned both to maternal sensation or ultrasonic observation by 92 +/- 23 min in the first group and 36 +/- 11 min in the second group. No adverse effect of the relaxant has been observed in any of the mothers. There was no evidence of local soft tissue, nerve or muscle damage at the site of injection on initial examination of the neonates after delivery. The use of neuromuscular relaxant in fetus was a safe and useful method.

[J Clin Ultrasound](#). 1990 Mar-Apr;18(3):179-84.

Major complications and deaths due to interventional ultrasonography: a review of 8000 cases.

[Nolsøe C](#), [Nielsen L](#), [Torp-Pedersen S](#), [Holm HH](#).

Source

Department of Ultrasound, Herlev Hospital, University of Copenhagen, Herlev, Denmark.

Abstract

Complications related to approximately 8000 ultrasound-guided punctures performed in our institution during the last 19 years are reported. This study includes 3500 fine needle biopsies, 700 large bore needle biopsies, 2800 punctures of fluid collections using either a 1.2-mm spinal needle or a 7.5 F pigtail catheter, and 1000 percutaneous nephrostomies. The majority were abdominal punctures. The complication rate was 0.187% (0.100% to 0.313%) and the mortality rate 0.038% (0.013% to 0.113%). Using the fine needle data exclusively, these rates were 0.200% (0.086% to 0.400%) and 0.028% (0.000% to 0.171%), respectively. The 95% confidence limits are in brackets.

[Chest](#). 1990 Jan;97(1):69-74.

Yield of percutaneous needle lung aspiration in lung abscess.

[Peña Griñan N](#), [Muñoz Lucena F](#), [Vargas Romero J](#), [Alfageme Michavila I](#), [Umbria Dominguez S](#), [Florez Alía C](#).

Source

Valme University Hospital, Seville, Spain.

Abstract

STUDY OBJECTIVE:

To evaluate the accuracy of PLA with a thin needle in the bacteriologic diagnosis of patients with lung abscess and in demonstrating possible coexistence of an underlying lung carcinoma, and the influence of this technique in the treatment and outcome of these patients.

DESIGN:

Case series.

SETTING:

Tertiary university referral center.

PATIENTS:

Consecutive sample of 50 patients with clinical picture suggestive of pulmonary infection and single or multiple cavitation of at least 1 cm in diameter on chest x-ray films, and lack of clinical suspicion of active pulmonary tuberculosis. One patient was excluded from the study after demonstration of tuberculosis by PLA.

INTERVENTIONS:

Lung aspirates were obtained under fluoroscopic guidance by introduction of a 22-gauge disposable spinal needle within the abscess cavity and were immediately transported to the bacteriology laboratory and pathology department for processing. All patients were initially treated with clindamycin. Tobramycin was added in all those patients with hospital-acquired infection, lack of foulness of sputum, and those who were initially severely ill. Definite treatment was based on the results of bacteriologic cultures.

MEASUREMENTS AND MAIN RESULTS:

Cultures of LAs were positive in 82 percent (40/49) of patients. In 20 cases the isolates were monobacterial (13 aerobic bacteria and seven anaerobic). In the remaining 20 cases, cultures grew more than one kind of bacteria (four exclusively aerobic, five exclusively anaerobic, and 11 mixed), with an average of 3.25 types of bacteria per case. Anaerobes were found as a single bacteria or associated with other aerobic bacteria in only 58 percent (23/40). The results of LA cultures led to change in the initial antibiotic trial in 23 patients (47 percent). Of ten cases in which bronchogenic carcinoma was demonstrated, cytologic study of LA was done in nine, and eight had positive cytologic yield. Pneumothorax occurred in seven cases (14 percent) as the sole complication.

CONCLUSIONS:

(1) Percutaneous lung aspiration had a high diagnostic yield and accuracy in our series, with a relatively low incidence of complications. (2) Anaerobic bacteria were less frequently implicated in our cases than previously reported. This finding led to significant changes in the initial empiric antibiotic treatment.

[Epilepsia](#). 1989 Jul-Aug;30(4):480-6.

Suppression of pentylentetrazol-elicited seizure activity by intraosseous lorazepam in pigs.

[Jim KF](#), [Lathers CM](#), [Farris VL](#), [Pratt LF](#), [Spivey WH](#).

Source

Department of Pharmacology, Medical College of Pennsylvania, Philadelphia.

Abstract

Use of the intraosseous (i.o.) route as an alternative venous access for drug administration has increased. This study examined the efficacy of i.o. lorazepam (LZP) in suppressing pentylentetrazol (PTZ)-induced seizure activity in pigs. Domestic swine (13-20 kg) were

prepared for recordings of arterial blood pressure, EEG, and electrocortical activity. Seizure activity was induced by PTZ (100 mg/kg i.v.). Sixty seconds after onset of seizure activity, animals either received no drug (control) or LZP (1.0 mg/kg) administered i.v. or i.o. via an 18- or 13-gauge spinal needle inserted in the right proximal tibia. Both i.o. and i.v. LZP significantly suppressed the duration of seizure activity (DSA) (s/min interval) within 1 min following drug administration: DSA control, 46.2 +/- 3.6; i.v. LZP, 25.0 +/- 5.1; i.o. (18-gauge) LZP, 27.6 +/- 6.0; i.o. (13-gauge) LZP, 24.0 +/- 2.4. Seizure activity was essentially abolished at 1 min following LZP infusion. In addition, both i.v. and i.o. LZP did not have significant effects on the basal heart rate and mean arterial blood pressure. The data demonstrate that in swine (1) the i.o. route is an effective alternative venous access for LZP administration, and (2) the size of spinal needles does not affect the antiepileptic efficacy of i.o. infusion of LZP.

[Epilepsia](#). 1989 Jul-Aug;30(4):472-9.

A comparison of intraosseous and intravenous routes of administration for antiseizure agents.

[Lathers CM](#), [Jim KF](#), [Spivey WH](#).

Source

Department of Pharmacology, Medical College of Pennsylvania, Philadelphia.

Abstract

Intravenous (i.v.) access for administration of antiepileptic drugs can be time-consuming and difficult in an infant during a seizure. This study examined the intraosseous (i.o.) route as an alternative means of vascular access for drug administration in an animal-seizure model. Domestic swine (13-20 kg) were anesthetized with ketamine (20 mg/kg i.m.) and alpha-chloralose (80 mg/kg i.v.) and given gallamine (4 mg/kg i.v.) to prevent muscle fasciculations. Tracheostomies were performed and the animals were ventilated with a Harvard respirator. The left femoral vein was cannulated and pentylenetetrazol (PTZ) (100 mg/kg) was given to elicit epileptogenic activity. Sixty seconds after onset of epileptogenic activity, the animals received saline or diazepam (DZP) (0.1 mg/kg) or propranolol (2.5 mg/kg) i.v. or via the i.o. route (18-gauge spinal needle placed in the right proximal tibia). Both DZP and propranolol were effective in suppressing epileptogenic activity via the i.v. or i.o. routes. Thus, the i.o. route is a rapid and effective alternative route for the administration of antiepileptic drugs when an i.v. route cannot be readily established.

[J Clin Pharmacol](#). 1989 Apr;29(4):354-9.

An investigation of the pathological and physiological effects of intraosseous sodium bicarbonate in pigs.

[Lathers CM](#), [Jim KF](#), [High WB](#), [Spivey WH](#), [Matthews WD](#), [Ho I](#).

Source

Department of Pharmacology, Medical College of Pennsylvania, Philadelphia.

Abstract

Recent interest in the intraosseous (IO) route as an alternative venous access for drug and fluid administration has increased. This study examined the physiological and skeletal pathological effects of IO NaHCO₃ in pigs. In the pathological studies, swine (8-10 kg) received NaHCO₃ (1 mEq/kg) in one tibia and saline (1 ml/kg) in the other tibia via an 18-gauge spinal needle inserted into the anteromedial surface of the bone. The animals were then observed for one month, sacrificed, and the tibias were isolated, sectioned, and stained for pathological examinations. The physiological effects of IO NaHCO₃ infusion were studied and compared with that of intravenous (IV) administration using a cardiac arrest model as previously described. The results demonstrated that NaHCO₃ had no effect on the mean arterial blood pressure and plasma catecholamine levels, but increased arterial pH values within two minutes of administration. Similar effects were found with IV NaHCO₃. Pathological data indicated signs of minimal local increase in skeletal turnover associated with IO NaHCO₃ infusion. It is concluded that the IO route is a safe alternative venous access for NaHCO₃ administration in swine.

[J Perinat Med.](#) 1989;17(6):393-8.

Prenatal diagnosis using sonographic guided cordocentesis.

[Shalev E](#), [Dan U](#), [Weiner E](#), [Romano S](#), [Giselevitz J](#), [Mashiach S](#).

Source

Department of Obstetrics and Gynecology, Central Emek Hospital, Afula, Israel.

Abstract

Cordocentesis has been practiced as a diagnostical tool for prenatal diagnosis of intrauterine infections, hematological disorders, metabolic status of the fetus and rapid cytogenetic analysis. The performance of 198 cordocentesis is presented over 3 years of experience. A 21 gauge spinal needle is inserted via the optimal point on the maternal abdomen under real-time ultrasonic guidance into the insertion of the umbilical cord in the placenta. Successful cordocentesis were achieved in 98.5% of the cases. Termination of pregnancy was directly related to the procedure in only 1%. Hematoma surrounding the puncturing site was demonstrated in one case, but without damage to the fetus. In our series the main indication for performing cordocentesis was the need for rapid karyotyping. The use of fetal lymphocytes for chromosomal analysis offers a rapid and a reliable method for routine clinical demands. The availability of a rapid chromosomal analysis offers a considerable advantage in pregnancies of advanced gestational age. In those pregnancies it appears to be most important to have a rapid diagnosis where anatomical structural anomalies are associated with chromosomal malformations in up to 30%. The metabolic status of the fetus is considered in either acute distress or in cases of suspected sub-optimal metabolic hemostasis, where IUGR or oligohydramnios are demonstrated. Cordocentesis, even though is a new technique, turns to play a major role in modern perinatology. The possibility of a direct rout to fetal blood vessels early during the pregnancy bears the tremendous potential of early diagnosis and treatment.

[Arthroscopy.](#) 1989;5(4):346-7.

A simple method of meniscus repair.

[Salisbury RB](#), [Nottage WM](#).

Source

University of Southern California, Division of Orthopedics, Kaiser Permanente, Bellflower 90706.

Abstract

Current understanding of knee meniscus pathology and the known consequences of meniscal loss dictate preservation of tissues wherever feasible. Surgical approaches to meniscal repair include open and combined arthroscopic-open or arthroscopic-percutaneous procedures. A variety of needles, guides, sutures, and retractors have been marketed. Over a 2 year period, we used these techniques in the repair of 19 medial and 5 lateral meniscus tears, with no known retears and no complications. We used an 18-gauge, 6-inch spinal needle and a strand of number one nonabsorbable suture.

[J Clin Pharmacol](#). 1988 Dec;28(12):1106-11.

Suppression of pentylenetetrazol-elicited seizure activity by intraosseous propranolol in pigs.

[Jim KF](#), [Lathers CM](#), [Spivey WH](#), [Matthews WD](#), [Kahn C](#), [Dolce K](#).

Source

Department of Pharmacology, Medical College of Pennsylvania, Philadelphia 19129.

Abstract

The intraosseous (IO) route provides a rapid and effective alternative venous access in the pediatric population when the conventional intravenous (IV) route cannot be easily obtained. DL-propranolol, a beta-adrenoceptor antagonist, exhibits antiepileptic activity in various animal seizure models. This study assessed the efficacy of IO propranolol in suppressing pentylenetetrazol (PTZ)-induced seizure activity in pigs. Domestic swine (13-20 kg) were prepared for recordings of arterial blood pressure, ECG and electrocortical activity. Seizure activity was induced by pentylenetetrazol (PTZ; 100 mg/kg; IV). Sixty seconds after the onset of seizure activity, the animals either received no drug (control) or propranolol (IV or IO via an 18-gauge spinal needle placed in the right proximal tibia). A transient increase (16.3-50.0%) in the mean arterial blood pressure (MAP) was observed following PTZ administration. Both IO and IV propranolol significantly suppressed the seizure duration (SD) (sec/min interval) at 1 min following drug administration; SD control, 36.3 +/- 4.8; IV propranolol, 12.3 +/- 5.1; IO propranolol, 18.3 +/- 6.0. In addition, both IV and IO propranolol produced a maximal decrease of 32-38% in the basal heart rate; and reduced the transient increase in MAP elicited by PTZ, with no significant effect on the basal MAP. The data demonstrate that 1) propranolol possesses anticonvulsant activity against PTZ-induced seizure in the pig, and 2) the intraosseous route is a rapid and effective alternative venous access for propranolol administration in swine.

[J Neurosurg](#). 1988 May;68(5):817-9.

Management of proximal shunt obstruction. Technical note.

[Duncan CC.](#)

Source

Department of Pediatric Neurosurgery, Yale University School of Medicine, New Haven, Connecticut.

Abstract

Proximal shunt obstruction or obstruction of the ventricular catheter may present with signs and symptoms of shunt failure with either no cerebrospinal fluid flow or a falsely low intracranial pressure (ICP) upon shunt tap. The author reports a technique for lowering the ICP and for measuring the pressure in patients with such obstruction by cannulation of the reservoir and ventricular catheter to penetrate into the ventricle with a 3 1/2-in. No. 22 spinal needle. The findings in 20 cases in which this approach was utilized are summarized.

[Am J Obstet Gynecol.](#) 1987 Jul;157(1):134-7.

Transabdominal chorionic villus sampling: a freehand ultrasound-guided technique.

[Brambati B](#), [Oldrini A](#), [Lanzani A](#).

Abstract

A simple transabdominal chorionic villus sampling method, carried out with a 20-gauge spinal needle under ultrasound guidance, was evaluated in 100 cases selected for genetic evaluation in the first trimester. Its use was limited to the management of anatomic and clinical conditions that contraindicated transcervical aspiration. The high efficacy of the method was demonstrated by an ability to obtain enough villus tissue for karyotyping in all but one case. In 94% of the cases, only one pass of the needle was required. Although the only complication observed was light bleeding in four cases, the safety of the method needs more extensive evaluation.

[J Neurol.](#) 1987 May;234(4):254-6.

Successful treatment of acute subdural haematoma associated with severe bleeding disorder.

[Verlooy P](#), [Lamers BJ](#), [de Haan GJ](#), [Noach LA](#).

Abstract

A 76-year-old man suffering from myelofibrosis with thrombocytopenia sustained an acute subdural haematoma with severe neurological deficit. He was treated initially by bedrest and dexamethasone. Craniotomy was contraindicated because his bleeding time exceeded 20 min in spite of multiple infusions of platelet concentrate. After 3 weeks his condition deteriorated with increase of the fluid collection shown by CT. Partial drainage of the haematoma by subdural puncture with a 22-gauge spinal needle resulted in complete recovery from the neurological deficit and complete resorption of the effusion. The case shows that it is possible to avoid craniotomy in the acute phase of a subdural haematoma in patients with bleeding disorders and that it may be advantageous to use needle evacuation instead of burr-hole drainage in the chronic phase.

[Radiology](#). 1987 Apr;163(1):75-8.

Preliminary experience with a dual cutting edge needle in thoracic percutaneous fine-needle aspiration biopsy.

[Weisbrod GL](#), [Herman SJ](#), [Tao LC](#).

Abstract

Results of 133 thoracic percutaneous fine-needle aspiration biopsies performed with a new dual cutting edge needle were analyzed to see if it could reduce the false-negative rate for malignancy compared with that achieved with a sharply beveled spinal needle. Results of cytologic examinations were compared with those of histopathologic examinations. Cores of tissue for histopathology could be obtained in only 51 biopsies (one of which was lost). Sensitivity of cytology (vs. histopathology) was 77.8% (vs. 57.1%); specificity and positive predictive value, 100% (same); and negative predictive value, 64.3% (vs. 46.4%). In 44 of 50 biopsies, cytologic results were equal to or better than histopathologic results diagnostically. In six biopsies (including two cases of hamartoma), the histopathologic result improved upon the cytologic result. There were no biopsies for which cytologic results were negative and histopathologic results were positive for malignancy. Use of this needle did not improve the false-negative rate for malignancy, although it did allow specific diagnosis of a hamartoma in two cases.

[Ann Emerg Med](#). 1987 Mar;16(3):305-7.

Intraosseous infusion flow rates in hypovolemic "pediatric" dogs.

[Hodge D 3rd](#), [Delgado-Paredes C](#), [Fleisher G](#).

Abstract

We tested a 20-gauge, 2 1/2-inch spinal needle and a 13-gauge, 3 1/2-inch bone marrow needle with Ringer's lactate delivered by gravity and 300 mm Hg pressure in vitro and in hypovolemic puppies to ascertain in vivo intraosseous flow rates and to determine the effects of catheter size and anatomic factors on flow rate. In vitro flow was significantly faster than in vivo flow ($P = .001$). In vivo, mean flow rates were 11 mL/min for the 20-gauge needle and 13 mL/min for the 13-gauge needle by gravity. The mean flows by 300 mm Hg pressure for the same needles were 24 mL/min and 29 mL/min. While the in vivo flow rates were significantly greater for the 13-gauge versus the 20-gauge needle, the differences were not clinically significant (2 mL/min difference by gravity and 5 mL/min difference by pressure). The clinically comparable in vivo rates for the two needles tested indicated that the rates are dependent on flow through the bone marrow rather than the size of the needle. The data suggest that while intraosseous infusion is a rapid technique for gaining vascular access, the flow rates achieved may not be sufficient for the definitive treatment of severe hypovolemic or hemorrhagic shock alone.

[Prog Clin Biol Res](#). 1987;237:111-23.

Techniques in the fine needle aspiration biopsy of the prostate.

[Ray P](#).

Source

Division of Urology, Cook County Hospital, Chicago, Illinois 60612.

Abstract

In general, aspiration cytology of the prostate has not been a frequently used technique, in part because all too often there has been a poor yield of cells for cytologic evaluation. The objective of this investigation was to evaluate various needle designs and techniques for obtaining specimens and making slides. Cadaver prostates and surgical specimens were used to evaluate a series of 22 gauge aspiration needles. Cytology slides were fixed and stained with either Papanicolaou or hematoxylin and eosin stain. Coded slides were assigned a score representing the number of fields (magnification X 40) covered. The angle of the bevel or the size of the side-port (0.030 inch long and 0.01 inch deep or 0.045 inch long and 0.01 inch deep) did not significantly affect the results. However, the presence of the side-eye on a control spinal needle or an existing Franzen aspiration needle significantly improved the yield of cells (P less than .05). Frosted and non-frosted slides were evaluated as well as other techniques for making smears. In conclusion, an outline for making cytologic slides for aspirations of the prostate is presented.

[Hinyokika Kiyo](#). 1987 Jan;33(1):43-6.

[Direct renal pelvic puncture in the bacteriologic study in patients with uretero-intestinal urinary diversion (a new technic for diagnosis of upper urinary tract infection)].

[Article in Japanese]

[Taki Y](#), [Hayashi T](#), [Ikai K](#), [Hiura M](#), [Kiriyaama T](#).

Abstract

The renal pelvis of ten patients with ileal or colonic conduit was punctured with a 22G spinal needle under fluoroscopic guidance. Renal pelvic urine was obtained from nine patients. Two patients temporarily developed gross hematuria as a complication due to this procedure. The obtained renal pelvic urine was investigated bacteriologically. Direct renal pelvic puncture was concluded to be a useful and safe technique for locating urinary tract infection. Reflux of infected urine into the renal pelvis did not occur in any of the nine patients who had no obstruction of the ileal or colonic conduit.

[Fertil Steril](#). 1986 Dec;46(6):1128-32.

Removal of bacterial contaminants from semen for in vitro fertilization or artificial insemination by the use of buoyant density centrifugation.

[Bolton VN](#), [Warren RE](#), [Braude PR](#).

Abstract

Buoyant density centrifugation of semen produces the accumulation of populations of highly motile, morphologically normal spermatozoa in the lowermost 1 ml of Percoll (Pharmacia Fine Chemicals AB, Uppsala, Sweden) density gradients. In addition, the majority of bacteria present in semen are retained in the seminal plasma at the top of the gradients. Of 40 semen samples examined, 37 contained detectable bacteria, but after buoyant density centrifugation, the spermatozoal populations collected from the lowermost 1 ml of the Percoll columns were

found to contain few or no bacteria. When preparations were collected using sterile technique (by boring a hole through the bottom of the centrifuge tube), 14 of the 20 preparations were found to be bacteria-free. When preparations were collected by passing a spinal needle from the surface through the seminal plasma to the bottom of the centrifuge tube, the sterility of the final spermatozoa preparations was not maintained, with only 5 of the 20 samples completely free of bacteria. The residual bacterial contamination of the remaining 15 samples was, however, very low (less than 5 colonies after a 48-hour culture period).

[J Neurosurg.](#) 1986 Jul;65(1):32-6.

Percutaneous retrogasserian glycerol rhizotomy for trigeminal neuralgia. A prospective study of 100 cases.

[Arias MJ.](#)

Abstract

A prospective study of percutaneous retrogasserian glycerol rhizotomy (PRGR) with and without metrizamide trigeminal cisternography is reported in the treatment of the trigeminal neuralgia. A series of 100 patients with typical trigeminal neuralgia were allocated randomly to two treatment groups: Group I patients received PRGR with trigeminal cisternography (50 cases) and Group II patients received PRGR without trigeminal cisternography (50 cases). The results indicate that PRGR without trigeminal cisternography is a valid alternative to the original technique. Factors that assured the accurate performance of the modified technique proposed in this study were: spontaneous cerebrospinal fluid drainage; radiologically confirmed placement of the thin spinal needle at the clival edge into the trigeminal impression of the petrous apex and in the center of the foramen ovale; a positive response to the glycerol test; clinical control of the final glycerol injection; and an alert and cooperating patient throughout the entire procedure.

[Obstet Gynecol.](#) 1986 Jul;68(1):70-3.

Five hundred cases of amniocentesis without bloody tap.

[Katayama KP,](#) [Roesler MR.](#)

Abstract

Five hundred amniocenteses were carried out at midtrimester for prenatal diagnosis. A 22-gaugespinal needle with a stylet was used. The needle was guided by a real-time sector ultrasonograph. A transducer was placed adjacent to the puncture site and the needle tip was observed entering the amniotic cavity. By this technique, a bloody tap was avoided. There were only three (0.6%) spontaneous abortions in this group of 496 patients. Amniocentesis guided by ultrasound is a safe method for the mother and the fetus.

[Ann Ophthalmol.](#) 1986 Jan;18(1):14-5.

The use of a trochar to fixate a dislocated lens.

[Bodé D,](#) [Lloyd WC 3rd,](#) [Griffith DG.](#)

Abstract

The surgeon can skewer a dislocated or subluxed lens with a trochar from a 25-gauge spinal needle to fixate the lens when removing it through the anterior segment.

[Ann Ophthalmol.](#) 1985 Jul;17(7):434-6.

Surgical treatment of dislocated iris-plane intraocular lenses.

[Hamburger HA](#), [Lerner L](#).

Abstract

This report describes a patient with a Binkhorst four-loop intraocular lens dislocated in the vitreous. The implant was repositioned by means of a combination of the Barraquer-Chowdhury needle-fixation method with a McCannel suture. The pupil was maximally dilated, and the patient was placed in the prone position. When the implant drifted into the anterior chamber, it was anchored with a 25-gauge spinal needle through the limbus. It was then refixated to the iris with a 10-0 prolene suture.

[Hinyokika Kiyo.](#) 1985 Jul;31(7):1269-73.

[Antegrade pyelography].

[Article in Japanese]

[Hoshina A](#), [Yamasaki Y](#), [Kato M](#), [Ogawa H](#), [Tada S](#).

Abstract

Percutaneous antegrade pyelography under ultrasonic real-time guidance was performed in 18 cases of obstructive hydronephrosis, which were poorly visualized the renal collecting system on excretory urography and in which retrograde pyelography could not be performed successfully. This technique was safe, accurate and easy, and provided significant diagnostic information in these cases. With the patient under local anesthesia an 18 gauge spinal needle was inserted into the renal pelvis. Approximately 10-20 ml fluid were withdrawn from the renal pelvis for cytology and culture. After the injection of contrast medium radiograms were obtained in adequate positions. Delayed films were obtained when indicated. In 8 cases pelvic and/or ureter tumor was diagnosed. In two cases congenital anomalies were diagnosed, one had complete obstruction at the ureteropelvic junction and the other had complete obstruction at the ureterovesical junction. In the other three cases ureter ligation and in 5 cases ureter stenosis were diagnosed. The quality of the aspirated urine was dark-red in 6 cases, positive cytology, in 6 cases, all of which had pelvic and/or ureter tumors. No severe complications were observed.

[Laryngoscope.](#) 1985 Jun;95(6):644-9.

Transcutaneous Teflon injection of the paralyzed vocal cord: a new technique.

[Ward PH](#), [Hanson DG](#), [Abemayor E](#).

Abstract

Because of anatomical deformity, trismus, or for other reasons, it may on occasion be impossible to visualize a larynx by the usual laryngoscopy methods. Such difficulties in

patients who have paralytic dysphonia may also make it impossible to effect improved vocal cord closure by the usual techniques of Teflon injection. We have applied a new technique, detailed in this report, to these problem cases. Following topical anesthesia of the nose, nasopharynx, and larynx, 1% Xylocaine is injected over the cricothyroid membrane. A flexible or telescopic laryngoscope connected to a television camera is introduced through the nose or oral cavity, respectively. A 16-gauge spinal needle is introduced into the subglottic tracheal lumen via the cricothyroid membrane and directed into the undersurface of the paralyzed vocal cord under indirect visual control. Teflon is then injected, monitored via the television image. Our early experience with this simple technique indicates that voice improvement is comparable to that expected using conventional transoral laryngoscopic techniques.

[Am Rev Respir Dis.](#) 1985 Mar;131(3):389-92.

Percutaneous needle lung aspiration for diagnosing pneumonitis in the patient with acquired immunodeficiency syndrome (AIDS).

[Wallace JM](#), [Batra P](#), [Gong H Jr](#), [Ovenfors CO](#).

Abstract

Fourteen patients with acquired immunodeficiency syndrome (AIDS) or suspected AIDS underwent percutaneous needle lung aspiration (PNLA) for evaluation of 16 occurrences of acute pneumonitis. A 22-gauge spinal needle was passed 2 to 3 times in the area of greatest radiographic involvement under fluoroscopic guidance. The specimen was immediately placed on microscope slides for Gomori's methenamine silver and Papanicolaou staining. The needle was then flushed with sterile water for bacterial, Legionella, viral, mycobacterial, and fungal cultures, and for Legionella immunofluorescent staining. Diagnostic information was provided by 14 of the 16 procedures. Of 11 patients ultimately found to have *P. carinii* pneumonitis, PNLA specimens were diagnostic in 10 (91%). Infectious agents other than *P. carinii* also were identified by PNLA, including cytomegalovirus (4 cases), *M. avium-intracellulare* (1 case), and pyogenic bacteria (3 cases). Complications of PNLA were: pneumothorax in 7 cases (44%), 3 (19%) of which required chest tube evacuation; and minor hemoptysis (less than 50 ml) in 2. The PNLA can be a useful diagnostic procedure in the patient with AIDS and pneumonitis. It has the advantages of being less costly and time-consuming than fiberoptic bronchoscopy. It is, however, frequently complicated by pneumothorax, making it an inappropriate approach for patients with significant respiratory compromise.

[Acta Neurochir \(Wien\).](#) 1984;72(1-2):73-8.

Recoiling suture and methylmethacrylate in aneurysm thrombosis. Preliminary report.

[Patil A](#), [Nagaraj MP](#).

Abstract

Injection of acrylic material into the aneurysm is a relatively simple procedure if escape of the material into the circulation can be prevented by means of a coil inserted into the aneurysm prior to injection of the acrylic material. In the present study, polypropylene (00000) suture was given a coiling property. On extrusion through a 22 gauge spinal needle the suture regained its coiled shape. Experiments were carried out on dogs with the external carotid artery serving as a model for an aneurysm. Using a 22 gauge spinal needle, first the coiled

suture was inserted into the aneurysm and then methylmethacrylate was injected. Ten aneurysms were thrombosed. None of the animals suffered a neurological deficit. Complete thrombosis of the aneurysms were noted in all the animals. On perfection, this technique could eventually be used for stereotaxic thrombosis of intracranial aneurysms.

[Zhonghua Wai Ke Za Zhi](#). 1983 Dec;21(12):767.

[Percutaneous trephination with spinal needle for ventriculocentesis].

[Article in Chinese]

[Xu WL](#).

[S Afr Med J](#). 1983 Jun 4;63(23):878.

Suprapubic catheter insertion and bladder filling with a spinal needle.

[O'Leary R](#), [Khan M](#).

[Ultrasound Med Biol](#). 1983;Suppl 2:569-72.

Advanced ultrasound evaluation of fetal hydrocephaly.

[Sharma S](#), [Warner R](#), [Steinbrecher M](#), [Bader B](#), [Kolb D](#), [Shah Y](#), [Remuzzi J](#).

Abstract

Advancing technology of ultrasound imaging has unraveled numerous problems in perinatology. The 1980's is the era of high-resolution real time ultrasonography, enabling the diagnosis of fetal hydrocephaly to be made in midtrimester pregnancy even prior to the age of fetal viability. The findings obtained by full evaluation of hydrocephalic fetuses with serial ultrasounds are helpful in appropriate counseling of parents by the birth defects team and in planning the best time and management of delivery in a perinatal center. Arrest of progression of severe hydrocephaly in the second half of pregnancy prior to fetal lung maturity has been accomplished by intrauterine implantation of ventriculoamniotic shunts. The potential risk of maternal soft tissue injury from delivery of an oversized head of a severely compromised fetus can be minimized by partial and slow decompression of fetal head under ultrasound guidance using a #20 spinal needle. The influence of the recent developments on better fetal diagnosis and survival of infants with neural tube defects in 1981 was compared to that obtained during the previous five years.

[J Pediatr](#). 1982 Dec;101(6):1036-7.

Bone marrow aspiration with a 22-gauge spinal needle.

[Urban C](#), [Mutz I](#), [Kaulfersh W](#).

[JAMA](#). 1982 Jul 23;248(4):449-53.

Treatment of tic douloureux by percutaneous retrogasserian glycerol injection.

[Lunsford LD](#).

Abstract

Thirty patients with tic douloureux underwent treatment by percutaneous retrogasserian glycerol injection (PRGI). All patients had symptomatic trigeminal neuralgia refractory to medical therapy. Fifteen patients had recurrent tic after one to four prior operations. The technique was simple to perform and required no intraoperative physiological testing or short-acting barbiturate supplementation during transovale placement of a spinal needle in the trigeminal cistern of Meckel's cave. Precise placement of small volumes (0.15 to 0.35 mL) of sterile glycerol was ensured by first demonstrating the anatomy of the trigeminal cistern using metrizamide. Overall, 23 patients have remained pain free five to 12 months after treatment. Nineteen patients had no change in facial sensation after injection. Treatment by PRGI is a valid alternative therapy for tic douloureux, with the additional benefit of a much-reduced incidence of facial sensory loss when compared with differential thermal rhizotomy by a radiofrequency-induced lesion technique. Facial deafferentation is not mandatory for successful percutaneous treatment of tic douloureux.

[Surg Neurol](#). 1982 Apr;17(4):247-50.

Transsphenoidal injection of silicone for the production of communicating or obstructive hydrocephalus in dogs.

[Page LK](#), [White WP](#).

Abstract

A technique for the insertion of a spinal needle through the soft palate and sphenoid bone into the suprasellar cistern of dogs is described. Instillation of room-temperature-curing silastic elastomer via the needle causes an increased resistance to the flow of cerebrospinal fluid in the basal subarachnoid spaces above the tentorium, for the production of communicating hydrocephalus. If the needle is advanced farther, the same material can be injected directly into the third ventricle for the production of obstructive hydrocephalus. Twenty-five of 34 dogs (74%) developed hydrocephalus and survived to undergo subsequent experimentation.

[J Pediatr](#). 1982 Apr;100(4):595-6.

Bone marrow aspiration with a 22-gauge spinal needle.

[Dinndorf PA](#), [Clark BS](#), [Bleyer WA](#).

[Appl Neurophysiol](#). 1982;45(4-5):484-91.

Somatotopic arrangement of lateral spinothalamic tract in percutaneous cervical cordotomy.

[Iseki H](#), [Amano K](#), [Kawamura H](#), [Tanikawa T](#), [Kawabatake H](#), [Notani M](#), [Shiwaku T](#), [Kitamura K](#).

Abstract

As a new clinical approach for the purpose of mapping a lamina analysis, the present report deals with another landmark for insertion of the spinal needle in man other than the usual dentate ligament when performing a percutaneous cordotomy. Electrophysiological studies were made on 19 patients in order to determine the effect of electrostimulation with a bipolar concentric electrode, as well as to corroborate the position of the electrode radiologically. A new apparatus has been devised so that one can locate the target insertion point easily.

[Br J Radiol.](#) 1981 Jul;54(643):572-5.

Vascular anatomy in the suboccipital region and lateral cervical puncture.

[Cox TC](#), [Stevens JM](#), [Kendall BE](#).

Abstract

The theoretical risk of injuring the vertebral artery or anomalous vessels at lateral cervical puncture is assessed. In just less than 30% of vertebral arteries the vessel overlies the lateral aspect of the spinal canal between the first and second cervical vertebrae, usually the antero-inferior quadrant. Directing the spinal needle to the posterior third of the canal virtually eliminates the possibility of injuring this and most anomalous arteries traversing the region. The likelihood of inducing subarachnoid haemorrhage by injuring these vessels would appear to be considerably less in lateral cervical than in cisternal puncture.

[J Urol.](#) 1979 May;121(5):559-61.

New technique for percutaneous nephrostomy under ultrasound guidance.

[Sadlowski RW](#), [Finney RP](#), [Branch WT](#), [Rosenthal NS](#), [Sharpe JR](#).

Abstract

The 8F cystocath has been used as a temporary percutaneous nephrostomy. B-mode ultrasonography was used to determine the depth and direction of trocar placement after initial confirmation with a spinal needle. No immediate complications were noted in 10 successful insertions and there was only 1 failure of entry.

[J Gynecol Obstet Biol Reprod \(Paris\).](#) 1979;8(7):603-11.

[Early amniocentesis, 1061 punctures and 1000 pregnancies].

[Article in French]

[Henrion R](#), [Papa F](#), [Rouvillois JL](#), [Henrion-Géant E](#).

Abstract

The authors analysed 1061 early amniocentesis carried out during 1000 pregnancies. The indications were as follows: chromosomal abnormalities (79,6 p. 100), fetal karyotypes for X-linked diseases (4,7 p. 100), metabolic disorders (5,9 p. 100), amniotic fluid alpha-fetoprotein (9,8 p. 100) in neural tube defect or congenital nephrosis. Amniotic fluid was obtained on the first attempt in 98.2 p. 100 and on the second attempt in 100 p. 100. The fluid

was heavily blood-stained in 1,7 p. 100, sanguinolent in 3,8 p. 100 and brownish in 2,40 p. 100. Cells were grown on the first attempt in 98 p. 100 and on the second attempt in 100 p. 100. The outcome of pregnancies was correlated with the indications of amniocentesis. The rate of spontaneous abortion is 1,7 p. 100, but only 6 of them can be due to amniocentesis (0,6 p. 100). Perinatal mortality was 1,8 p. 100: mortality (1,2 p. 100) and neonatal mortality (0,6 p. 100). All this fetal deaths have other causes. The fetal loss was 3,9 p. 100. Fetal morbidity was low: none fetal injuries, none cutaneous scar, few premature deliveries (1,6 p. 100), some malformations more or less serious (2,6 p. 100) with 4 congenital luxations of the hips (0,45 p 100). Maternal morbidity was limited at a greater cesarean section rate: 21 p. 100 (30 p. 100 in women 40 years old and more), none feto-maternal rhesus immunization was observed because immunoprophylaxis was strictly performed. The rate of therapeutic abortion was 4,6 p. 100 without any diagnostic error. Diagnostic accuracy was 100 p. 100. Several conditions are necessary to be the procedure safe accurate and reliable: appropriate genetic counseling, exact determination of gestational age (17 international weeks), sufficient volume of amniotic fluid counseling, exact determination of gestational age (17 international weeks), sufficient volume of amniotic fluid (uterus size: 12 cm), gynecologic examination by operator himself, perfect echography to localize the placenta and detect multiple gestations, adequately trained obstetrician, use of 20 gauge spinal needle, strict asepsis, experimented laboratory and experienced staff.

[Radiology](#). 1978 Sep;128(3):830.

A modified technique for needle localization in arthrography of the shoulder.

[Wills JS](#), [Diznoff SB](#).

Abstract

The authors describe a simple technique for establishing satisfactory position of the needle in the shoulder joint for arthrography. Local anesthetic is placed in the hub of the spinal needle and is often drawn into the joint when the needle enters, causing a sudden drop in the fluid level.

[Am J Gastroenterol](#). 1977 Jul;68(1):30-3.

Needle aspiration biopsy of the pancreas at laparotomy.

[Kline TS](#), [Abramson J](#), [Goldstein F](#), [Neal HS](#).

Abstract

Thin needle aspiration biopsies obtained from the pancreas during laparotomy have been taken on 56 patients over the past six years. An 18- to 22-gauge spinal needle attached to a disposable syringe was employed. The specimens were fixed immediately and stained according to the method of Papanicolaou. Of the 36 carcinomas, the accuracy was 94%; there were no false positives in the 20 benign lesions. The safety, ease of interpretation and high accuracy of this method make this an extremely useful procedure.

[No Shinkei Geka](#). 1976 Apr;4(4):365-70.

[Percutaneous revision of shunt with obstructed ventricular catheter (author's transl)].

[Article in Japanese]

[Ono H](#), [Moriyama T](#), [Uneoka K](#), [Matsumura H](#), [Fujita Y](#).

Abstract

Shunt dysfunction due to an obstructed ventricular catheter can be avoided, at least in part, by placing the of the catheter anteriorly to the Foramen of Monro. However, once the catheter is obstructed, surgical removal under general anesthesia is almost inevitable. Irrigation method for an obstructed ventricular catheter enables us to gain scarcely anything and accumulation of instilled fluid in the ventricle often causes the dangerously increased intracranial pressure. 1) Technique for placement of the ventricular catheter. The skin incision is a semicircular. After the skin flap is reflected, "8-shaped" burr hole is placed (Fig. 1 in the text). At first, two openings, large and small, are made in the skull. At 1/4 inch drill is used for making a small hole and a regular perforator for an adjacent large one, then, with a small Schlessinger roungeur, a thin wall dividing these two holes is removed. Two to 3 cm lateral from the midline and also posterior to the frontal hair line is usually chosen for placement of burr holes. A straight ventricular catheter with multiple small perforations at its tip is connected to the Rickham reservoir and inserted in the ventricle anteriorly to the Foramen Monro, through the small hole of the "8-shaped" burr hole. Rest of surgical procedure is performed according to a routine manner. 2) Technique for release of ventricular catheter obstruction by percutaneous management through the "8-shaped" burr hole. A 20-gage modified spinal needle is inserted through the Rickham reservoir under fluoroscopic control and gradually progressed to the tip of the obstructed catheter. Simple aspiration through the needle may occasionally open the catheter by removing small obstruents, but in many instances, insertion of an another ventricular needle through the large hole and combined irrigation are indispensable. 3) Results. Ten of 72 patients who had placement of the ventricular catheter by this technique developed obstructions of the catheter. Percutaneous technique was successful in releasing the obstructions in 12 times of these 8 patients and remaining 2 patients were subsequently operated upon for the following reasons. One patient, because of dislodging of the reservoir cap after successful release of obstruction and the other, due to extraventricular location of the tip of the catheter prior to the percutaneous management. No serious complications has been encountered and the technique was proved to be safe and simple ensuring good functional return of the shunt in long-term follow-up.

[Diabetes](#). 1975 Oct;24(10):910-4.

Effect of cerebral intraventricular insulin on pancreatic insulin secretion in the dog.

[Chen M](#), [Woods SC](#), [Porte D Jr](#).

Abstract

The effect of cerebral intraventricular insulin on pancreatic insulin secretion was investigated. An extracorporeal pancreatic blood circuit was established after laparotomy to monitor blood flow and insulin concentration directly from the superior pancreaticoduodenal vein. Phentolamine was infused throughout (0.2 mg./min. intravenously) to block alpha-adrenergic effects of any catecholamine secretion induced by surgical stress. Glucose (1.5 mg./kg./min. intravenously) was infused to maintain a constant baseline stimulation of insulin secretion. Six dogs received insulin and six control dogs received saline through a spinal needle stereotaxically placed into the left lateral cerebral ventricle. After central injection of insulin (0.2 U./kg.) there was a significant increase of pancreatic output as early as five

minutes. It is concluded that the pancreatic beta-cells are under the influence of insulin-sensitive cells of the CNS.