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Fetal surgery

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Abstract

What is fetal intervention?

Fetal surgery is any of a broad range of surgical techniques that are used to treat birth defects in fetuses who are still in the pregnant uterus. All fetal intervention is really maternal-fetal intervention, and the most important consideration in all fetal intervention is the safety of the mother: her current health and her furture reproductive potential. The intervention is designed to benefit the fetus who has a problem, but the mother is an innocent bystander who assumes some risk for the sake of her unborn fetus. In weighing the risks versus the benefits of an intervention, the most important consideration is the mother, her health, her family, and her ability in the future to have other children.

What are the Indications?

Congenital diaphragmatic hernia, Congenital cystic adenomatoid malformation, Congenital heart disease, Pulmonary sequestration, Sacrococcygeal teratoma,...

What are the techniques of fetal intervention?

There are three general approaches to fetal intervention, all of which have been developed in the last few decades. The most definitive and most invasive is open fetal surgery.

Open Fetal Surgery: involves completely opening the uterus to operate on the fetus.

Fetendo Fetal Surgery: Minimally invasive fetoscopic surgery (fetendo) uses small incisions and is guided by fetoscopy and sonography

Fetal Image-Guided Surgery (FIGS-IT): The manipulation is done entirely under real-time cross-sectional view provided by the sonogram. examles: amnioreduction/Infusion and balloon Dilation Aortic Stenosis

EXIT procedure: The EXIT procedure is a type of intervention that occurs at the time of delivery. The head of baby is delivered and before the infant is separated from the placenta, the pediatric surgeon uses a bronchoscope through the baby's mouth to look more closely at the airway.

What is the risk to the mother?

The risk to the mother varies with the type of fetal procedure. leakage of amniotic fluid, separation of membranes and preterm labor persists. For open surgery, the risk is of general anesthesia and of the abdominal incision, but most important is the consequence of the incision in the uterus itself. The immediate consequence is preterm labor and the need for monitoring and medications to control preterm labor. The longer term consequence is the incision in the uterus and the need for Cesarean delivery in this and all subsequent pregnancies. The others are

Key Words: Fetal surgery, mother, risk ...

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Sedation, Analgesia, and Delirium in the Adult ICU Patients

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Abstract

Maintaining an optimal level of comfort and safety for critically ill patients is a Medicine (ACCM) of the Society of Critical Care Medicine's (SCCM's) practice parameters for the optimal use of sedatives and analgesics was published in 1995 and recommended a tiered approach to the use of sedatives and analgesics, largely on the basis of expert opinion.

Intensive care unit (ICU) patients commonly have pain and physical discomfort from obvious factors, such as preexisting diseases, invasive procedures, or trauma. Patient pain and discomfort can also be caused by monitoring and therapeutic devices (such as catheters, drains, noninvasive ventilating devices, and endotracheal tubes), routine nursing care (such as airway suctioning, physical therapy, dressing changes, and patient mobilization), and prolonged immobility.

Assessment of pain intensity may be performed with unidimensional tools, such as a verbal rating scale (VRS), visual analogue scale (VAS), and numeric rating scale (NRS). VAS comprises a 10-cm horizontal line with descriptive phrases at either end, from "no pain" to "severe pain" or "worst pain ever."

Nonpharmacologic interventions including attention to proper positioning of patients, stabilization of fractures, and elimination of irritating physical stimulation. Pharmacologic therapies include opioids, nonsteroidal anti-inflammatory drugs (NSAIDs), and acetaminophen.

The indications for sedative agents are not well defined. Sedatives are common adjuncts for the treatment of anxiety and agitation. The causes of anxiety in critically ill patients are multifactorial and are likely secondary to an inability to communicateamid continuous noise (alarms, personnel, and equipment), continuous ambient lighting, and excessive stimulation (inadequate analgesia, frequent vital signs, repositioning, lack of mobility, and room temperature).

Sleep deprivation and the circumstances that led to an ICU admission may increase patient anxiety, affecting up to 50% of ICU patients. Agitation is common in ICU patients of all ages, occurring at least once in 71% of patients in a medical-surgical ICU. Agitation can be caused by multiple factors, such as extreme anxiety, delirium, adverse drug effects, and pain.

Frequent assessment of the degree of sedation or agitation may facilitate the titration of sedatives to predetermined endpoints. The Riker Sedation-Agitation Scale (SAS) was the first scale proven to be reliable and valid in critically ill adults. The appropriate target level of sedation will primarily depend on a patient's acute disease process and any therapeutic and supportive interventions required.

A common target level of sedation in the ICU is a calm patient that can be easily aroused with maintenance of the normal sleep-wake cycle, but some may require deep levels of sedation to facilitate mechanical ventilation. The desired level of sedation should be defined at the start of therapy and reevaluated on a regular basis as the clinical condition of the patient changes.

Benzodiazepines are sedatives and hypnotics that block the acquisition and encoding of new information and potentially unpleasant experiences (anterograde amnesia) but do not induce retrograde amnesia. Benzodiazepine therapy should be titrated to a predefined endpoint, often requiring a series of loading doses.

Propofol is an intravenous, general anesthetic agent. However, sedative and hypnotic properties can be demonstrated at lower doses. Compared with benzodiazepines, propofol produces a similar degree of amnesia at equisedative doses in volunteers.

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Clonidine has been used to augment the effects of general anesthetics and narcotics and to treat drug withdrawal syndromes in the ICU. The more selective _-2 agonist, dexmedetomidine, was recently approved for use as a sedative with analgesic-sparing activity for short-term use (_24 hours) in patients who are initially receiving mechanical ventilation.

As many as 80% of ICU patients have delirium, characterized by an acutely changing or fluctuating mental status, inattention, disorganized thinking, and

an altered level of consciousness that may or may not be accompanied by agitation.

Placing severely ill patients in a stressful environment for prolonged periods exacer-bates the clinical symptoms of delirium.

The gold standard criteria used to diagnose delirium is the clinical history and

examination as guided by the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV). Critical care nurses can complete delirium assessments with the CAM-ICU in an average of 2 minutes with an accuracy of 98%, compared with a full DSM-IV assessment by a geriatric psychiatric expert, which usually requires at least 30 minutes to complete.

Inappropriate drug regimens for sedation or analgesia may exacerbate delirium

symptoms. Psychotic or delirious patients may become more obtunded and confused when treated with sedatives, causing a paradoxical increase in agitation Neuroleptic agents (chlorpromazine and haloperidol) are the most common drugs used to treat patients with delirium. They are thought to exert a stabilizing effect on cerebral function by antagonizing dopamine-mediated neurotransmission at the cerebral synapses and basal ganglia. Haloperidol is commonly given via intermittent I.V. injection. The optimal dose and regimen of haloperidol have not been well defined. Haloperidol has a long half-life (18–54 hours) and loading regimens are used to achieve a rapid response in acutely delirious patients.

Key Words: Sedation, Analgesia, Delirium, Intensive care unit

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Knee osteoarthritis and pain management

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Abstract

Background: Knee osteoarthritis is a common problem in pain clinics that frequently coincident with other derangements. Also, creepy nature of the disease, disability and severe pain implies necessity of a multimodal approach.

Methods: This lecture focuses on latest treatments proposed for knee pain such as drugs, invasive and noninvasive procedures like injections, Radiofrequency ablation (RF) and physical treatments.

Results: Intractable knee pain due to osteoarthritis is a common problem. Routine pain protocols are disappointing in many cases. Therefore, research to find an embraced multimodal protocol is crucial.

Conclusions: This lecture is a review of the latest studies of the knee osteoarthritis and pain management of the disease.

Key Words: Knee osteoarthritis, pain, new treatments

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Percutaneous Pedicle Screw-rod Fixation of the Lumbar Spine

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Abstract

The use of pedicle screw–assisted spinal stabilization has become increasingly popular worldwide. Pedicle screw systems engage all three columns of the spine and can resist motion in all planes.

Pedicular fixation is a relatively safe procedure in all spinal disorders, which needs stabilization and is not associated with a significantly higher complication risk than non-pedicular instrumentation. It provides short, rigid segmental stabilization that allows preservation of motion segments and stabilization of the spine in the absence of intact posterior elements, which is not possible with non-pedicular instrumentation.

With integration of robotic, endoscopic, and image-guided systems, we present an image-guided method percutaneous pedicular fixation with minimally invasive spine surgery. Complex spinal instrumentation can then be accomplished with more precision through small portals, thus reducing morbidity, lessening post- operative discomfort, reducing time in the intensive care unit, reducing hospitalization, decreasing medication, creating less disability, and reducing expenses.

The percutaneous pedicle screw fixation through the pedicle of vertebra using Sextant system is a good minimally invasive surgical therapeutic choice for patients with compression and burst lumbar and thoracolumbar fracture except for that the percutaneous fixation has a little insufficiency in resuming the anterior height of the fractured vertebra compared with open method.

We present 8 cases that operated with this method and with good fellow up.

Key Words: pedicle screw–assisted spinal stabilization**,** spinal disorders

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Ischemia monitoring during cardiac surgery

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Abstract

The use of transesophageal echocardiography (TEE) in the operating room during cardiac surgery has some great benefits in cardiovascular monitoring. Direct and fast visualization of the structural anatomy of the heart and large vessels are its important advantages, and it facilitates the hemodynamic and functional assessment of the cardiovascular system.

TEE is an important method for early diagnosis of myocardial ischemia, adjustment of valve repairs and exchanges, determination of acute hemodynamic disorders, and diagnosis of pathologies not identified in the preoperative period. It provides real time information, then TEE can guide the surgeon to correct inadequate repairs and prevent or treat surgical complications before the patient leaves the operating room therefore reducing the need of reoperations. Due to its benefits TEE should use in modern cardiac surgery.

Several reports have shown the positive impact of using this technique in defining surgical strategy, assessment of operative results, and influences anesthetic management

Routine use of TEE in cardiac surgeries is cost- benefit because its use can reduce patient morbidity, and risk of reoperation.

Segmental contractility of LV can Detect by TEE and also localization of changes demonstrate as early signs of monitoring myocardial ischemia. These changes are seen early (< 1 minute) after the onset of inadequate myocardial perfusion

TEE is the most sensitive and early monitoring method in the diagnosis of intraoperative myocardial ischemia. The transversal transgastric view, at the level of papillary muscles in which we can visualize the territories irrigated by the three main coronary arteries, is used more commonly for monitoring segmental LV changes.

My presentation would go on explanation of using TEE in operation room and showing some views of saved cases.

Key Words: Transesophageal echocardiography, Cardiac surgery, Ischemia

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Role of pelvic and para-aortic lymphadenectomy In endometrial cancer

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Abstract

How can we select patients at risk of lymphatic spread?

Para-aortic lymphadenectomy limited to patients with at least one of the following criteria: type 2 endometrial cancer, deep myometrial invasion (>50%), tumor diameter >2 cm, positive pelvic nodes (assessed at frozen section). Which are the patterns of para-aortic lymphatic spread? Extent lymphatic involvement included: patients with tumor diameter > 2.0 cm, o r endometrioid grade 3,or non-endometrioid EC ,had a substantial risk of> 10% . In this situation the patients categorized as the low-risk group: Endometrioid type grade 1 and 2, MI <50%, tumor diameter ≤2 cm.

No macroscopic evidence of extra uterine witch lymphatic involvement have less than 1% risk of lymphatic spread. But positive paraaortic nodes cases were likely to have:grossly positive pelvic nodes ,grossly positive adnexae, or grade 2 or 3 lesions,with outer-third myometrial invasion .When, the pelvic nodes were negative Usually paraaortic nodes were negative. also we observed positive paraaortic nodes when there is positive pelvic nodes . We notice the potential advantages pelvic and para-aortic lymphadenectomy that included: Complete surgical staging .

Targeting postoperative treatment, reducing morbidity related to unnecessary radiation therapy, eradicate metastatic lymphatic disease.

The main goals of lymphadenectomy is to tailor adjuvant treatment to decrease,radiation-related morbidity in patients , with negative nodes.

Pelvic lymphadenectomy alone represents any therapeutic role for pelvic lymphadenectomy .An incomplete surgical effort because of the partial removal of metastatic nodes. Because node palpation through the peritoneum, and node sampling are inaccurate in predicting lymph node positivity. Isolated para-aortic dissemination(In the absence of pelvic lymph node Involvement) is generally very uncommon (≤5%).we must be considered the Impact lymphadenectomy on morbidity, quality of life longer operative times and greater risk of intra-operative and postoperative complication .

We still do not have an adequate answer on the role of lymphadenectomy in endometrial cancer. Postoperative therapy needs to be individualized

According to these prognostic factors.

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Navigation and augmented reality in brain and spine surgery

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Abstract

Neuronavigation technologies provide surgeons with the precision, control and visualization necessary to resect the maximum amount of tumor, while preserving function and minimizing potential impact to critical brain structures. surgeons can visualize the patient's anatomy in 3D prior to and during surgery while also seeing the exact location of their surgical instrumentation.

This method enables surgeons to:

- Enhance tumor boundary recognition
- Determine the optimal placement and size of the craniotomy
- Account for brain shift during the procedure
- Plan the least invasive surgical path

The error of the navigation has to be divided into the technical error of the device calculating its own position in space, the registration error due to inaccuracies in the calculation of the transformation matrix between the navigation and the image space, and the application error caused additionally by anatomical shift of the brain structures during operation.

In spine surgery, computer-assisted spinal navigation and augmented reality technologies have allowed surgeons to ensure precision in localization and instrumentation insertion.

Computer-assisted image guidance allows the surgeon to have a multi-planar view of the spine in real time with accurate reference to the spinal anatomy. This allows the surgeon to view structures that are not completely exposed during the procedure.

This technologies have not been without criticism. There is concern about the length of operative time, learning curve, cost, and disruption in flow of the operative procedure. With progressive advances in technology and surgeon experience, these limitations and drawbacks are minimized, and the many benefits outweigh the criticisms.

Key Words: Neuronavigation**,** brain and spine surgery

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Monitoring in Endovascular Methods of Treatment in Neruosurgery

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Abstract

Intraoperative neurologic monitoring has four key principles:

• The pathway at risk during the surgical procedure must be amenable to monitoring.

• The monitor must provide reliable and reproducible data.

• If evidence of injury to the pathway is detected, some intervention should be possible.

• If changes in the neurologic monitor are detected, they may have prognostic value even if no intervention is possible. In this situation, the direct benefit to the patient from early detection of impending neurologic injury is minimal.

- Few randomized prospective studies have evaluated the efficacy of neurologic monitoring modalities.
- Anesthesiologists can improve the efficacy of monitoring by maintaining good physiologic homeostasis and stable levels of anesthesia during parts of the surgical procedure that place the nervous system at greatest risk.
- Based on clinical experience and nonrandomized studies, four practice patterns for use of neurologic monitoring have emerged:

• In some procedures, monitoring is recommended and is used by most centers.

• In certain procedures, monitoring is used frequently in some centers but not in others.

• Some procedures have no clear clinical experience or evidence indicating that monitoring is useful at all (experimental use).

• In certain procedures, monitoring is used selectively for patients believed to be at higher than usual risk for intraoperative neurologic injury.

- Good communication among surgeons, anesthesiologists, and neurophysiologists is essential to optimizing the utility of monitoring.

1. NON INVASIVE: Transcranial Doppler Ultrasound - Jugular Bulb Venous Oxygen Saturation Cerebral Oximetry
2. Tissue-Level Blood Flow Monitoring(INVASIVE):Thermal Diffusion Cerebral Blood Flow Monitoring - Tissue Partial Pressure of Oxygen Monitoring
3. Electroencephalogram
4. Sensory-Evoked Responses: SSEP(Somatosensory-Evoked Potentials),BEAP(Brainstem Auditory-Evoked Potentials),VEP(Visual-Evoked Potentials)
5. Motor-Evoked Potentials
6. Electromyography

Intracranial Neurovascular Surgery: (Monitors: Somatosensory-Evoked Potentials, Motor-Evoked Potentials)

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Key Words: Neruosurgery, Endovascular Methods, Treatment

Relationship of childhood low dose radiation and bone involvement in scalp BCC

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Abstract

Background: radiationBasal cell carcinoma (BCC) is the most common human malignant neoplasm.(1) Many genetic and environmental factors are involved in its onset BCC is observed in sun-exposed areas of skin.(2) Some patients with scalp BCC have had a history of childhood scalp radiation for the treatment of tinea capitis.Total dose of radiation and irradiated site exposed to sunlight can lead to short incubation period. It is not clear whether BCC in these cases has a more aggressive nature and requires a more aggressive resection, the aim of this review was to evaluate the diference between BCC tumor specifications and bone involvment between irradiated and non irradiated patients.

Methods: 264 patients admitted to hospital with biopsy confirmed BCC disease, clinic and hospital records of demographic parameters such as age, sex and background radiation in childhood, is being explored.The interval between onset and diagnosis of the disease, size of the tumor and bone involvement (according to intraoperative findings is that the most reliable method of diagnosis) were extracted. data on each patient enrolled in a check list. finally, data were analyzed using SPSS.

Results: History of radiation therapy , a significant effect on the skull bone involvement in patients with BCC, In this study, the mean number of lesions in patients with a history of radiotherapy was significantly higher than in other patients . Place BCC lesions in patients with a history of radiation therapy in the areas of parietal and frontal while patients who had a history of radiation therapy , the most common on the forontal . The most common sites of bone involvement were vortexed and Partyal . Osteomyelitis more common in men than women. Occupation patients had no significant impact on tumor location . BCC lesions in patients with a history of radiation therapy were significantly older than patients without a history of radiation . lesions were smaller in patients with frontal lesions,than in other regions, particularly parietal and vertex.

Conclusions: The history of radiation therapy had a significant effect on the number and size of lesions involvement of the skull bone and bone lesion in patients with BCC .

Key Words: Childhood Radiation; Scalp BCC; Bone Involvement

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Clinical Practice Guideline: Red Blood Cell Transfusion in Adult Trauma and Critical Care

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Abstract

40% of patients receiving RBC transfusions. Mean of 5 RBC units transfused per patient. Pretransfusion Hb: 8.5 g/dL. Most RBC transfusions in ICU (90%) are used for the treatment of anemia.

ndication for transfusion consist on, evidence of hemorrhagic shock, Hb is <7g/dL) is as effective as a "liberal" transfusion strategy (transfusion when Hb is <10g/dL) in critically ill patients with hemodynamically stable anemia, except in patients with acute myocardial infarction (MI) or unstable myocardial ischemia, Hb is <7 g/dL in critically ill patients requiring mechanical ventilation and resuscitated critically ill trauma patients.

RBC transfusion should not be considered as an absolute method to improve tissue VO_2 in critically ill patients. RBC transfusion may be beneficial in patients with acute coronary syndromes (ACS) who are anemic (Hb ≤8 g/dL) on hospital admission.

RBC transfusion is associated with increased nosocomial infection (wound infection, pneumonia, sepsis) rates independent of other factors. RBC transfusion is an independent risk factor for MOF and SIRS. There is a relationship between transfusion and ALI and ARDS. (Level 2)

Key Words: Guideline, Red Blood Cell Transfusion, Adult Trauma, Critical Care

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Minimally Invasive Biopsy for a Breast Mass: Analysis of 116 patients

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Abstract

Background: Considering breast cancer is a high health priority in Iran because it is the most common cancer in women, the diagnostic approach for patients with breast lumps is important. Today, core needle biopsy (CNB) with histological findings is counted as one of the most important diagnostic measures that make preoperative assessment and planning for appropriate treatment possible. The aim of this study was to determine the sensitivity and specificity of core biopsy results in benign and malignant breast lumps.

Methods: In this study, 116 patients who were referred to the Ghaem Hospital Surgery Clinic for breast lump complaints and who underwent diagnostic procedures such as mammography and ultrasound were selected. Then patient consents were obtained and their demographic data and medical history such as (biopsy, cancer history, and cancer risk factors) were recorded. Next, the core biopsy needle (Tru-cut #14) was inserted into the patients' palpable lump by the surgeon and on the non-palpable lump by a radiologist assistant under ultrasound guidance. Then excisional biopsy was performed. The benign, malignant and unspecified samples from the core needle were evaluated with the samples of the surgical and pathological findings and then a false positive, false negative, sensitivity, specificity, and diagnostic accuracy of the core needle biopsy method was calculated.

Results: The mean age of the 116 patients participating in this study was 39 years and the mean tumor size was 2.7 cm. The right breast had more involvement and an average of 3.35 biopsies was taken from all of the patients. Most of the pathology samples taken from CNB and excisional biopsy were invasive ductal carcinoma. Of the B type classifications, B5 was the most frequent in both methods. Skin discoloration was the most common core biopsy complication reported. Inadequate samples in core biopsy were 2.5%. Among biopsy complications, hematoma was significantly related to the number of biopsies. Accuracy, sensitivity, specificity, false positive, and false negative excisional biopsy procedure compared with CNB is as follows: 97.3%, 95%, 100%, 0.0% and 0.027%, respectively.

Conclusions: Core needle biopsy has a high sensitivity and specificity with low side effects. Considering the fact that doing core needle biopsy does not need any anesthesia and hospitalization, it is a suitable method to diagnosis benign or malignant breast lumps.

Key Words: core needle biopsy; breast lumps; sensitivity and specificity

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شاخه خراسان

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Stereolithographic biomodelling for craniomaxillofacial surgery

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Abstract

Background: Stereolithographic (SLA) models have become a valuable resource in preoperative planning in craniomaxillofacial reconstruction. The objective of this study was highlight the development and current usage of stereolithography in craniomaxillofacial surgery and provide illustration of it use.

Methods: The literature reviewed was found by searching the PubMed, Sciencedirect, and Googlescholar for the terms Stereolithographic, biomodelling and craniomaxillofacial surgery.

Results: The manufactured stereolithographic biomodels improve the quality and precision of essential diagnostic measurements and is useful for surgical preplanning, reconstruction of cranial and facial bone, ear or orbital wall defects, primary reconstruction in craniomaxillofacial trauma surgery, and for accurate, preoperative adaptation of reconstruction plates or osteosynthesis devices. While the stereolithographic process has had a beneficial impact on the field of craniofacial surgery, the added cost of the procedure continues to be a hindrance to its widespread acceptance in clinical practice. With improved technology and accessibility the utilization of stereolithography in craniomaxillofacial surgery is expected to increase.

Conclusions: Reference to several individual cases demonstrates how pre-operative Stereolithographic modelling can refine the accuracy of diagnostic information, facilitate preoperative planning and surgical technique, and reduce operating time. Although the use of stereolithography in routine cases is quite rare, it is already used in various places with very satisfactory results especially in severe cases of craniomaxillofacial deformities.

Key Words: craniomaxillofacial, surgery, Stereolithographic biomodelling

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Comparing Harmonic scalpel versus Electrocautery in Axillary Lymph node dissection for breast cancer surgery

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Abstract

Background: For patients with axillary lymph node metastases from breast cancer, performance of a complete Axillary lymph node dissection (ALND) is the standard approach. Due to the rich lymphatic network in the axilla, it is necessary to carefully dissect and identify all lymphatic channels. Traditionally, these lymphatics are sealed with clips or individually sutured. The ultrasound scissors are recently emerging as an alternative surgical tool for dissection and hemostasis and have been extensively used in the field of minimally invasive surgery.

Methods: We studied the utility and advantages of this instrument compared with electrocautery to perform axillary dissection. The operative and morbidity details of thirty breast cancer patients who underwent axillary dissection using the ultrasound scissors were compared with 30 matched controls operated with electrocautery by the same surgical team.

Results: Operative time was not improved with use of ultrasonic dissection, however, there was decrease in the total number of days that closed suction drainage was required and significantly reduces the blood loss and post-surgical pain as compared to electrocautery.

Conclusions: The use of ultrasonic dissection was shown to reduce days that closed suction drainage was required and reduce the blood loss and post-surgical pain. Our results must be confirmed bye larger series.

Key Words: Harmonic scalpel, Electrocautery, breast cancer surgery

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Radiologic and Clinical Outcomes of Surgery in High Grade Spondylolisthesis Treated with Temporary Distraction Rod

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Abstract

Background: Techniques of surgery used in treatment of the patients with lumbar high grade spondylolisthesis (>50% slippage) are usually associated with a great amount of controversies. We aim to evaluate the surgical outcomes of high grade spondylolisthesis treated with intraoperative temporary distraction rod.

Methods: We retrospectively studied 21 patients (14 female, 7 male) with high grade lumbar spondylolisthesis aged 50.4±9.2 years old that had been treated with intraoperative temporary distraction rod, neural decompression, pedicular screw fixation, and posterolateral fusion involving one more intact upper vertebra. The mean follow-up period was 39.2 months. Radiologic and clinical outcomes were measured by slip angle, slip percentage, correction rate, Oswestry Disability Index (ODI), Visual Analogue Scale (VAS), patient's satisfaction rate in pre- and postoperative era. Data were analyzed by SPSS ver. 11.5.

Results: Preoperative and final follow-up visits denoted that surgery could improve ODI, VAS lumbar, and VAS leg from 60.5% to 8.2%, 6.7 to 2.2, and 6.9 to 1.3, respectively. Slip angle and percentage was also changed from -8 to -15, and 59.2% to 21.4%, respectively. Mean correction rate at final visits was 64.1%. Loss of correction was insignificant and neurologic complication occurred in one patient due to bad placement of the screw. Excellent and good satisfaction occurred in 90.5%.

Conclusions: In surgical treatment of refractory high grade spondylolisthesis, temporary distraction rod to reduce the slipped vertebra in associated with neural decompression, posterolateral fusion, and longer instrumentation is coupled with satisfactory clinical and radiologic outcomes.

Key Words: High grade spondylolisthesis; Distraction Rod; Surgery

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Surgical treatment of urinary incontinence

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Abstract

Surgery for the treatment of UI is usually considered as an option in pathways of care only after the failure of conservative therapy or drug treatment, although the emergence of minimally invasive procedures with low rates of adverse effects may modify this principle in the future.

The aim of all operations for UI is to make patients continent, usually by allowing them to store urine normally. However, the mechanisms for achieving this vary widely.

Mid-urethral sling (retropubic, transobturator and self-fixing single incision slings) is the preferred surgical intervention for women with uncomplicated stress urinary incontinence.

If mid-urethral sling cannot be considered offer colposuspension (open or laparoscopic) or autologous fascial sling to women with stress urinary incontinence.

Adjustable mid-urethral sling only offer as a primary surgical treatment for stress urinary incontinence as part of a structured research programme.

Do not offer bulking agents to women who are seeking a permanent cure for stress urinary incontinence.

Consider secondary synthetic sling, colposuspension or autologous sling as first options for women with complicated stress urinary incontinence.

Implantation of AUS or ACT for women with complicated stress urinary incontinence should only be offered in expert centres.

UI = urinary incontinence; AUS = artificial urinary sphincter; ACT = adjustable compression therapy.

Key Words: Surgical treatment, urinary incontinence

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Amnioinfusion in pregnancy

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Abstract

Amniotic fluid is primarily the product of fetal urine and lung liquid, and is resorbed via fetal swallowing and intramembranous flow across the chorioamnion. The relative contribution of each route of fluid exchange changes across gestation. The fluid surrounding the fetus serves a variety of functions. Amnioinfusion refers to the instillation of fluid into the amniotic cavity and can be done as a prophylactic, diagnostic, or therapeutic intervention.

Amnioinfusion is typically performed during labor through an intrauterine pressure catheter introduced transcervically after rupture of the fetal membranes. Alternatively, fluid can be infused through a needle transabdominally, the reverse process of amniocentesis.

Potential Indications for amniocentesis include:

Prevention and treatment of repetitive variable decelerations

Prevention of meconium aspiration

Reduction in cesarean deliveries performed for repetitive FHR decelerations

Improved visualization during sonographic or fetoscopic assessment of fetal anomalies

Treatment or prevention of chorioamnionitis in premature rupture of membranes

As an aid to external cephalic version

Complications of amnioinfusion are rare and include maternal amniotic fluid embolism, cord prolapsed, uterine rupture in women with previous cesarean delivery, iatrogenic polyhydramnios, chorioamnionitis and intrapartum fever.

Protocols for amnioinfusion vary across institutions. There is no evidence that any one method is superior in terms of safety, efficacy, or complications rates.

Key Words: Amnioinfusion, pregnancy

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Comparison of two kinds of blue dyes in minimally invasive approach to the axilla in breast cancer Surgery?

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Abstract

Background: We evaluate detection rate and local complications of methylene blue (MBD) in comparison of patent blue dye (PBD) for Sentinel Lymph Node (SLN) biopsy in early breast cancer patients.

Methods: In a cohort prospective study on 312 patients, divided in two group (156 patients in each group) bases on a kind of blue dye, we filled out a check list for the patients with demographic data, size of tumor, stage, detection of sentinel lymph node and complications and then analyzed the data.

Results: Mean tumor size was 2.4 cm. Detection rate was in MBD group 77.5% with dye alone and 94.2% with dye and radioisotope; in PBD group it was 80.1% and 92.9% respectively. We had blue discoloration of the skin in 23.7% in PBD group and 14.1% in MBD that was significantly lower and also local inflammation in 1 patient in PBD group and 5 in MBD that was significantly higher. We did not have skin necrosis and systemic.

Conclusions: Methylene blue is less expensive and has acceptable detection rate and low complications comparing Patent blue.

Key Words: Breast cancer, Sentinel lymph node, Blue dye, Local complication

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Lymphocintigraphy in Gynecologic cancers

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Abstract

In Gynecologic cancers it is very important to know if the lymphatic system is involved or not .Decision for extension of surgery and lymphadenectomy in each patient then would be planned.

The newest and most accurate way is lymphocintigraphy and using hand held gamma probe to find the SLN. Sentinel node finding by this technique has been done with high accuracy in cervical, uterine, vulvar and ovarian cancer in our department on many patients. This technique is very helpful in finding the stage of disease, planning the best extension of surgery and post operative adjuvant therapy.

We hope this technique be routin in all gynecooncologic centers.

Key Words: Lymphocintigraphy, Gynecologic cancers

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Frequency of Face lesion in CT scan of traumatic patient that referred to Taleghani Hospital of Kermanshah 2012

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Abstract

Background: Trauma is the most common reason of death in 1-34 years olds. In patient with multiple trauma, the Face is the most common involved part. The importance of computed tomography (CT scan) in diagnosis of brain trauma is well established and CT of the Face is a choice method. Finding lesion in Face traumatic patient is very important so goal of this study is finding of brain CT scan in traumatic patient that referred to ayatollah Taleghani hospital of Kermanshah 2012.

Methods: In this cross-sectional an descriptive study Face CT scan finding of 650 patient with Face trauma that referred to CT scan department of Taleghani hospital of Kermanshah in 2012 was evaluated. For data collection used pre-prepared tables that contain demographic data, finding of Face lesion location and location was broken and finally data with descriptive statistics were analyzed.

Results: The results show that 67.04 % of 650 patients were male and 32.41% were in 15-34 years olds. In this study we evaluated computed tomograms of traumatic patients, 512 (90.49%) case of 650 patients have normal Face CT scan and 138 (9.51%)case have positive finding that this finding are :

31 cases had brain contusion, 20 cases had epidural hematoma, 25 cases had zygomatic fracture, 12 cases had subarachnoid hemorrhage, 8 cases had intracranial hemorrhage, 10 cases had mandible fracture and 32 cases Nasal Bone fracture was detected.

Conclusions: Due to the high frequency of normal and face fracture CT scan in this study and disadvantages of no indication CT scan, it is necessary for clinical physicians to pay attention and do accurate efforts because there is some concerns that the CT scan of brain is going to be a routine application.

Key Words: Face Lesion, CT scan, Trauma, Kermanshah

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Outcome of bronchial repair in 10 patients with main bronchus injury following blunt chest trauma

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Abstract

Background: Bronchial avulsion is a serious complication of blunt chest trauma which can be easily missed at initial presentation of a multiple trauma patient. Missing the diagnosis can increase the risk of mortality and morbidity. In this study, we evaluated outcome of 10 patients with bronchial injury following blunt chest trauma underwent bronchial repair.

Methods: We evaluated 10 patients with bronchial injury following blunt chest trauma, underwent bronchial anastomosis in Ghaem hospital of Mashhad, Iran and Imam Khomeini hospital of Tehran, Iran from 2001 to 2012.All patients ruled out for associated injury. Demographic characteristic, anatomical location of injury, mechanism of injury, complications of bronchial anastomosis, and one year follow up of patients studied.

Results: Eight men and two women included in this study with mean age of (23.1±4.72) years. Eight patients had injury to RMB and two of them had injury to LMB. Time duration between surgery and diagnosis was from immediately to 6 monthes after injury. One mortality happened in operating room immediately after injury due to asphyxia. All remaining 9 patients underwent successful anastomosis of avulsed bronchus.7 cases encountered complications after repair, all managed with conservative approach. In one year follow up, one case with remaining stenosis underwent stent replacement.

Conclusions: Early diagnosis of injury to major airway is an important factor in successful management and outcome. With improvement in surgical technique, regular follow up and accurate management of complications, we can expect successful bronchial repair to save lung even in late diagnosis.

Key Words: Bronchial injury, Blunt trauma, anastomosis, lung resection

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Role of Navigation in Endonasal Endoscopic Skull Base Surgery

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Abstract

Endonasal endoscopic skull base surgery is a well known approach to deep sitted and complex region of cranial base. It has enabled otolaryngologists and neurosurgeons to collaboratively treat a variety of diseases extending from frontal sinus to craniocervical junction in sagittal plane and from orbit to infratemporal fossa and parapharyngeal space in coronal plane.

Navigation systems along with better understanding of endoscopic anatomy of skull base and using HD camera and monitor systems have permitted surgeons to deal with advanced lesions in this area.

Navigation systems help surgeons to confirm the anatomical locations of important structures such as optic nerve, internal carotid artery, skull base and orbit during surgery. It is reliable and accuracy is acceptable.

We present our experience of more than 250 endoscopic skull base surgery using navigation systems in a variety of approaches and lesions. We conclude that navigation systems is essential in this type of surgery and help surgeons to do more effective resections with fewer morbidities.

Key Words: Navigation, Endonasal endoscopic skull base surgery

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Journal of Surgery and Trauma 2014; Vol 1, Issue 5 (Supplement Issue): O22

Role of Laser in Surgery (why & How)

Majdabadi Abbas

Laser and Optics Research

Abstract

No other scientific discovery of the 20th century has been demonstrated with so many

exciting applications as laser acronym for (Light Amplification by Stimulated Emission of Radiation). For over 30 years, surgical lasers have been used in the field of human medicine. Laser is a powerful source of light having extraordinary properties which are not found in the normal light sources like tungsten lamps, mercury lamps, etc. The unique properties of laser are coherency, monochoromatic, low divergence and high intensity .It sometimes described as "scalpels of light," used alone or with conventional surgical instruments in a diverse array of procedures. Laser surgery uses an intensely hot, precisely focused beam of light to remove or vaporize tissue and control bleeding in a wide variety of non-invasive and minimally invasive procedures. These unique characteristics of laser have made it an important tool in various medical applications such as:

- Dentistry,
- Dermatology,
- Neurosurgery,
- Oncology (cancer treatment) ,
- Ophthalmology,
- Urology,
- ....
- Almost every medical surgery in which a removal of tissue is required or a cut needs to be made, can be done with a laser. Laser surgery often referred to as "bloodless surgery," laser procedures usually involve less bleeding than conventional surgery. The heat generated by the laser keeps the surgical site free of germs and reduces the risk of infection. Because a smaller incision is required, laser procedures often take less time (and cost less money) than traditional surgery. Sealing off blood vessels and nerves reduces bleeding, swelling, scarring, pain, and the length of the recovery period. In general, the results of surgery using lasers are better than the results using a surgical knife. Laser surgery advantages are:
- Dry field of surgery,
- Less postoperative pain,
- Sterilization,
- Clear field of view,
- Target selecting,
- Microsurgery under a microscope,
- Possibility to perform surgical procedures inside the body,
- Controlled by a computer,

Laser surgery can also involve risks that are not associated with traditional surgical procedures. Being careless or not practicing safe surgical techniques can severely burn the patient's tissue or even cause them to explode. Patients must wear protective eye shields while undergoing laser surgery on any part of

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the face near the eyes or eyelids.

In this article we are also describe why and how we have to use surgical lasers in different medical application. Meanwhile we explain role of laser parameters on interaction laser beam with soft and hard tissue.

Key Words: Laser, Surgery, Role

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LVAD is an alternative for Heart transplant in End stage Heart Failure.

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Abstract

Number of patients with Progressive uncontrollable Heart Failure is growing increasingly and there is not many therapeutic options for it. The mainstay of treatment for this end stage heart disease is drug management and Heart transplant. LVAD (The left ventricular assist device) is an Attractive Alternative for Transplant The left ventricular assist device, is a mechanical pump that is implanted inside a person's chest to help a weakened heart ventricle pump blood throughout the body and Unlike a total artificial heart, the LVAD doesn't replace the heart.; it just helps it do its job. This can permit for some patients waiting for a heart transplant (called "bridge to transplant"). LVADs may also be used as ''destination therapy,'' which is an alternative to transplant. Destination therapy is used for long-term support in some terminally ill patients whose condition makes them ineligible for heart transplantation.

Key Words: The left ventricular assist device, Heart transplant, End stage Heart Failure

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شاخه خراسان

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The Evaluation of treatment results and assessment of surgical approach in patients with intrathoracic goiter

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Abstract

Background: We describe the clinical characteristics of patients with intrathoracic goiter and our principles in surgical management of this pathology. Surgery is the treatment of choice for intrathoracic goiters, but there are still some controversies on their definition, the surgical approach, and the complications rate. We analyzed our experience in a tertiary care referral center.

Methods: We conducted a retrospective review of 100 patients with intrathoracic goiter who underwent surgical intervention.

Results: The patients were 78% female and 22% male, with a mean age 53 . Shortness of breath was observed in 73 (73%) patients as the most frequent preoperative symptom after neck mass. The surgical procedure was performed by cervical approach only in most of the cases (90%). We used extra cervical approach in 10% of cases: cervicotomy and sternotomy in 8 cases, right axillary thoracotomy in 2 cases. Postoperative complications exist in 16 cases (16%). Major post operative complications were transient recurrent laryngeal nerve palsy (5%). Pathology examination of excised tumors showed malignancy in 8% of cases.

Conclusions: The presence of a cervico-mediastinal thyroid mass with requires a surgical excision as the only treatment option. The cervical approach can be safely performed in most of the patients with intrathoracic goiters. Extension of goiter below the aortic arch was associated with a significant increase in sternotomy (P<0.001).

Key Words: Intrathoracic goiter, mediastinal goiter, substernal goiter, thyroidectomy, cervicotomy**.**

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Hydatid Cyst of Pancreas: A Report of 5 Cases

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Abstract

Background: Echincocosis is one of the world's wide spread parasite zeoneses . Pancreatic localization of hydatid disease is extremely rare, with an incidence of less than 1% of all cases. Preoperative diagnosis may be difficult regarding the absence of clinical or radiological specific signs.

Methods: we report retrospective study of five cases of hydatid cyst of the pancreas thought our study we may to clarify clinical manifestation, radiological feature and therapeutic modalities.

Results: The five patients consisted on two men and three women with an average age of 27 years. Abdominal pain was predominatly noted in the cysts involving body & tail of the pancreas. Two patients presented with obstructive jaundice due to the extrinsic compression of the common bile duct. Hemagglubination tests were done in two patients and were negative. All patients were operated. Total cystectomy & external drainage was performed in two cases, partial pancreatectomy in two cases and pancreatogegonostomy R&Y in one case. All patient discharged without complication.

Conclusions: Hydatid cyst of the pancreas is extremely rare even in endemic countries; it should be considend in the difficult diagnosis of cystic lesion of the pancreas CT scan could be helpful for the diagnosis. Surgery remains the treatment of choice in pancreatic hydatid cyst.

Key Words: Hydatid disease, pancreatic cyst, pancreas

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Myolysis

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Abstract

Myolysis is a new procedure for the treatment of leiomyoma. It is the destruction of fibroids using one of a focused energy delivery systems: radiofrequency electricity, supercooled cryoprobes, real time magnetic resonance imaging.

Myolysis is able to do as thermomyolysis and cryomyolysis which is required to laparoscopy or hysteroscopy.

Myolysis is unlikely to succeed on an extremely enlarged uterus. Also, it has not a satisfactory outcome in DUB.

Surgery only in patients with a favorable response, disappear symptoms (pelvic pain and pressure); and reduce myoma volume by 30 to 40%, but bleeding may persist.

There is minimal intraoperative bleeding, no patient has required transfusion to date. Coagulation of myoma under laparoscopic guidance can be done by using laser energy or a bipolar radiofrequency. It causes necrosis and devascularization of the muoma. The electrodes are passed through ancillary cannulas and pierce the myoma in a drilling fashion. Then, it coagulates the entire myoma by repeated drilling at multiple concentric sites.

Advancement of Radio frequency ablation by ThermoCon: low-power ~ moderate-power, temperature-monitoring, temperature-controlled, quantitative ablation: No Charring or Vaporization, reduced morbidity, more accurate.

Key Words: Myolysis, leiomyoma

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Colon injury in pediatric PCNL-Conservative Management

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Abstract

Background: Urolithiasis in childhood is not common but treatment of kidney stones are a major problem in children. Percutaneous nephrolithotomy (PCNL) is considered to be a safe and effective minimally invasive technique for management of renal calculi. Colon perforation and injuries of the abdominal organs are rare, but potentially serious complications of PCNL.

Methods: A 4-year-old girl with right staghorn, who underwent right PCNL in prone position. Following general anesthesia in the lithotomy position, a 5Fr ureteral catheter was inserted into the kidney and fixed to the urethral catheter. Access was made with an 18G needle through the lower calyx. A guide wire was inserted through the needle, and the tract was dilated with one-shot technique. A 26 Amplatz sheath was inserted. During nephroscopy, we encountered to fecal material in the colon.

Results: We put the nephrostomty tube into the colon(colostomy tube)and contrast study was done(colostography) on the surgical table that shows no connection between urinary tract and colon. The ureteral catheter and Foley catheter were left in place. Broad spectrum intravenous antibiotics was started. She was NPO for 2 days and then proceed to liquid and low-fiber diet. The nephrostomy tube (colostomy tube) is left until maturing of the colocutaneous tract. After 7 days a contrast study was done through the colostomy tube to ensure integrity of colon before removal of the colostomy tube. Conservative management was successful and colocutaneous fistula was closed after colostomy tube removal, without any complications.

Conclusions: Early diagnosis and conservative management of colonic perforation can minimize patient morbidity and result in excellent healing of the fistulous tract without any serious complications.

Key Words: Colon injury, Percutaneous nephrolithotomy, pediatric

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Comparison of High powerful magnet with the traditional repair by hand sew suture Intestinal anastomosis in rats

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Abstract

Background: In many surgical procedures in pelvic and abdomen, gastrointestinal anastomosis plays a main role. Prolonged time of intestinal anastomosis is such a problem that we face in the usual way of handsewn. Compression anastomosis with Magnet (magnamosis) is magnetic ring that is used in gastrointestinal endoscopic surgeries. In this study, we decided to compare the High powerful magnet with hand sew suture in intestinal anastomosis.

Methods: This study is an experimental trial that has been done by choosing 60 mice in same gender, race and weight and by dividing them randomly into two groups of case and control and placing them under the same care and nutritional conditions. Initially intestine of mice was completely disconnected from a relatively fixed point and then the intestinal anastomosis with High powerful magnet (Magnamosis) in case group and handsewn anastomosis was performed in the control group. Ten days after operation, the situation of anastomosis was studied in terms of possible complications of surgery including leak, adhesions, stenosis and obstruction in the surgical site. Then the anastomosis site with 3cm from the margin were resected to investigate tissue healing parameters and samples were evaluated histologically

Results: The mean time to perform the mice intestinal anastomosis was 735 secend (12:25 min) in the control group and about 366 secend (6:06 min) in the case group. The mean anastomotic bursting pressure to perform the mice intestinal anastomosis was 143.33 mmHg in the control group and about 147.53 mmHg in the case group.Mortality incidence in two groups showed no significant difference. Also in the performed laparotomy 10 days after the first operation, there was no significant difference in complications between two groups .In microscopic findings, tissue response in anastomosis site was more in magnamosis group in this 2 category: neo-angiogenesis and Collagen deposit. The important point was that there was no major difference statistically significant in inflammatory cells infiltration factor and fibroblastic activity

Conclusions: Regarding to shorter duration of High powerful magnet anastomosis technique (Magnamosis) and more favorable histological results in case group and also no difference in complications between the two methods, Magnamosis can be used as a new method in intestinal surgeries and their anastomoses.

Key Words: Intestinal Anastomosis, High powerful magnet ,Magnamosis, anastomotic bursting pressure ,intestinal suture

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Combined Tracheoinnominate artery fistula(TIF) and Tracheoesophageal fistula(TEF) : a very rare complication of indwelling tracheostomy tube

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Abstract

A serious problem of tracheostomy is tracheoinnominate artery fistula. Emergency approach for rapid diagnosis, prompt control of bleeding with a patent airway, operation with or without interruption of the innominate artery are the most important factors influencing patient outcome. Tracheoesophageal fistula is a severe problem associated with compromised quality of life. We report a case of Combined TIF and TEF in a 27-year-old man with quadriplegia after car accident who was successfully managed with interruption of the innominate artery, ligature of that and repair of trachea.

Key Words: Tracheoinnominate artery fistula, Tracheoesophageal fistula, surgery, Tracheostomy

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Abnormal foreign body in esophagus: a rare presentation

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Abstract

Foreign body (F b) ingestion and impaction of in esophagus can happen at any age but in children (<10 year) and adult (>50 year) are occur more frequent. This problem can event in both sexes with equal frequency. The problem such as impaired vision, poor dentation, psychotic patients, body packer, prisoners and in patient with esophageal lesion are risk factor for F b impaction in esophagus. The aim of this article is to study the causes, clinical presentation, surgical treatment and complications of foreign body ingestion at the same time as presenting a rare remarkable case. A 54-year old male that was drug abuser and with history of psychosis, came to the emergency ward with a clinical presentation of foreign body ingestion. Chest X-ray showed the metallic foreign body present in the cervical esophagous and in the upper part of thoracic esophagous. The onset of symptoms was 48 hours after ingestion, resulting in dysphagia and odinophagia. Vital sign was stable and he hadn't any symptoms due to mediastinitis. Emergency rigid esophagoscopy was done but the F B was impacted and didn't remove. Then cervical esphagotomy was done .A metallic coil was found that incorporated in mucosa of esophaguse. The diameter of coil was 3 CM and the long of coil was 12 CM. The coil was extracted from thoracic inlet. There were dense adhesions between the coil and posterior wall of esophagus. Posterior wall of esophagus was perforated .This perforation was repaired and a T tub (number 18)was inserted in esophagus. Jujenostomy was inserted for patient. The patient referred to psychiatric ward due to psychosis. We done barium swallow after 50 days from operation and he didn't leak. We conclude that early diagnosis is critical to the morbidity and mortality after foreign body ingestion. The miss diagnosis of rupture esophagus after foreign body ingestion can lead to life threatening complications.

Key Words: esophageal perforation, foreign body, surgery.

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The effect of family focused intervention on caregiver burden of the family members of the patients CABG

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Abstract

Background: Family burden is defined as the problems, concerns and unpleasant events affecting patients undergoing coronary arteries surgery, and is associated with these patients' physical and psychological improvement. Nurses are in a good position to provide appropriate intervention. This study aimed to investigate the effect of family focused interventions on burden of the family members of the patients undergoing coronary bypass surgery.

Methods: This is a clinical trial conducted on 50 family members of the patients undergone coronary bypass surgery in Isfahan Shahid Chamran hospital. Caregivers were selected by convenient sampling and were randomly assigned into two groups of study and control. Caregivers in the study group attended a three-interventional session program during their hospitalization time, while the subjects in control group did not. Data collection tool was Novak & Guest caring burden inventory (CBI). Data were analyzed by SPSS.

Results: Means and SDs of caring burden before and after intervention were 30.08 (14.03) and 19.2 (10) in study group respectively, and 30.16 (12.62) and 35.44 (10.42) in control group respectively. Changes of total scores of caring burden showed a significant difference after intervention in study and control groups ($P<0.001$). Score changes of subscales of time dependence ($P<0.001$), developmental ($P<0.001$), physical ($P<0.001$) and emotional caring burden ($P=0.007$) were also significant.

Conclusions: Results showed that family focused interventions were effective on reduction of family burden of the patients undergone coronary bypass surgery. Nurses can administrate family focused interventions to reduce the caregiver burden.

Key Words: Coronary bypass surgery, family focused, disease burden , family care, Iran.

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Monitoring In Lung Transplantation

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Abstract

Over the past decade, lung transplantation has become an increasingly important mode of therapy for patients with a variety of end-stage lung diseases .Four types of transplant procedures are generally available: Single lung transplantation (SLT), Bilateral lung transplantation (BLT), Transplantation of lobes from living related donors. Heart-lung transplantation (HLT).

The recipient is prepared for surgery once a donor lung has been identified, but induction of anesthesia is postponed until the donor lung has been inspected and approved by the retrieval team. If the donor lung is satisfactory, the recipient operation begins while the donor lung is in transit.

Immediate pretransplant reevaluation, recent physical status, the time and nature of the last oral intake should be determined to aid in deciding the appropriate method of securing the airway. Special mandatory pieces of equipment include some method to isolate the ventilation (A left—sided double-lumen endobronchial tube is suitable for virtually all lung transplant cases), fiberoptic bronchoscop (for endobronchial intubation confirmation).

The standard noninvasive monitoring (five electrocardiogram leads,blood pressure cuff, pulse oximetry, capnography, and temperature measurement) is used. In addition, some invasive monitoring such as invasive BP monitiring ,PA catheter and TEE is also used.

Perioperative monitoring of pulmonary artery (PA) pressures in lung transplant recipients is critical.A PA catheter capable of estimating right ventricular ejection fraction (RVEF) can be useful in diagnosing RV failure and its response to inotropes and vasodilators, as well as the response of the right ventricle to clamping of the PA. Continuous mixed venous oximetry is beneficial in evaluating tissue oxygen delivery in patients subject to sudden, severe cardiac decompensation in the course of the operation, as well as the responses to therapy.

Transesophageal echocardiography (TEE) is a semiinvasive monitoring technique increasingly used during lung transplantation. TEE is irreplaceable in informing the anesthesiologist about the correct time for extracorporeal oxygenation. Lung reperfusion brings with it the possibility of coronary gaseous embolism, easily detected with TEE. After lung transplant, TEE can be used to detect strictures, thrombi, or permeability of pulmonary venous anastomoses.

Patients presenting for lung transplantation frequently arrive in the operating room area without premedication. Indeed, many will be admitted directly to the operating room from home, these patients are often extremely anxious. Assiduous administration of adequate local anesthesia during placement of invasive monitoring will also considerably improve conditions for both the patient and anesthesiologist.

Key Words: Lung Transplantation, monitoring

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Prophylactic use of preoperative arterial catheterization to mitigate blood loss in women with abnormal invasive placenta

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Abstract

Obstetric hemorrhage is the leading cause of maternal mortality. Abnormal Invasive Placenta (AIB) (accrete, increta and precreta) is one of the most common cases of post partom. hemorrhag and peripartam hysterectomy. AIB can cause severe life –lhreating bleeding .The use of prophylactic pelvic arterial ballon catheterization at the time of cesarean can reduse the blood loss and transfused blood products units.

The patients with the antenatal sonographic diagnosis of placenta accrete undergo prophylactic pelvic artery ballon catheterization. This procedure is performed by the interventional radiology team in the angiography suite on the morning of the scheduled sesarean delivery. Under fluoroscopic guidance. Using a bilateral contralateral common femoral artery approach, with the distal end placed in the rear branch of the internal iliac arteries, and a monorail balloon catheter with adequate size are inserted. Following fetus delivery and cord damping, the balloon catheters are activated and hysterectomy are performed, and remove at the end of the procedure.

This procedure reduce the mean estimated blood loss and transfusion requirement. It is very useful for women requiring conservative treatment without hysterectomy who wish to preserve their fertility.

Key Words: arterial catheterization, abnormal invasive placenta, treatment

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Journal of Surgery and Trauma 2014; Vol 1, Issue 5 (Supplement Issue): P1

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Extrarenal willms, a differential diagnosis in childhood inguinal mass

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Abstract

As far as inguinal region mass may encountered frequently in children, the most common diagnosis is inguinal hernia. The diagnosis of inguinal hernia may make on parents' history of a typical bulging in groin and when the diagnosis made, surgical intervention always would be planned as soon as possible. Any further investigation is needed in a case of inguinal hernia. But this may not be so straight forward in some cases.

Nephroblastoma is the most common primary malignant tumor of kidney in children. Extrarenal Wilms tumor is rare and the most common site of extrarenal Wilms tumor is retroperitoneum extrarenal Wilms tumor and then inguinal area that may presented as an inguinal mass.

Case report: A 9-years old healthy girl was visited in a general hospital with initial symptom of a right inguinal bulging which was first noticed by her mother. In the first visit, herniotomy was planned by a general surgeon according to the presence of an inguinal mass. But after exploration of inguinal region, surgeon encountered a solid mass that wasn't compatible with hernia. Intraoperative diagnosis was lymphadenitis so an excisional biopsy was performed.

Histopathological findings showed typical triphasic pattern of epithelial, blastemal and stromal elements, characteristic of Wilms'tumor. The patient was referred to our center with primary diagnosis of Wilms tumor with inguinal node metastasis.

Discussion: Inguinal mass is a common complain in pediatrics that is mainly due to inguinal hernia. Other common diseases that may present as an inguinal mass include lymphadenitis and lymphadenopathy or ectopic gonad in cryptorchidism or entrapped ovary .

A groin mass may also encountered in a patient after a previous herniotomy. In this case, a recurrent inguinal hernia may come to mind first. Some other common probable diagnoses are reactive lymphadenopathy, lymphadenitis or local abscess and acquired cryptorchidism.

Conclusion: According to broad spectrum of differential diagnoses in a child with inguinal mass that may even be a neoplastic lesion, we suggest a meticulous physical examinations and further para clinical evaluations especially in patients with unusual presentations.

Key words: Nephroblastoma. Wilms, cryptorchidism, herniotomy

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The last medical treatment for recurrent urinary retension due to benign prostate hyperplasia

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Abstract

Background: Recurrent urinary retension is one of the indications for surgery in patients with benign prostate hyperplasia (BPH). We evaluated the effect of cyprotrone (the known anti androgen used for prostate cancer) and Tamsulosin with Betanecole for preventing more urinary retention in patients with BPH and retension.

Methods: Between April 2011 and May 2014 we evaluated 68 patients (age 52-73 years) with at least two episodes of urinary retension recommended for prostate surgery (open or Endoscopic TURP). All patients before catheter removing received daily cyprotrone tablet (50-100mg) for 7-10 days and continued for 4-8weeks in combination with daily Tamsulocin or other α blockers.

Oral Betanecole 10mg three times a day was used 12 hours before catheter removing and continued for 3-5 day and tapered for 5-8 days. All patients followed up for 6 to 24 months (mean time 14 months). Constipation was treated in all patients.

Results: 22 patients (36%) after removing catheter returned for urinary retension (12 hours to 7days) but other 46 patients (73%) responded to this method . After 1-6 months 13 patients (30%) of second group ask for surgery (due to noncompliance) but 33(70%) patients were satisfied for their medical treatment.

Conclusions: We strongly recommend using cyprotrone for treatment of urinary retension in patients with BPH in addition of their routine anti BPH drugs as the last hope for medical treatment.

Key Words: recurrent urinary retension, benign prostate hyperplasia, treatment

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Varicocelectomy only ligation or ligation and cutting the veins which one is better?

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Abstract

Background: Varicocelectomy is one of the most common surgeries in urology .Many surgeons prefer to legate and cut the affected spermatic cord veins but it needs to release and double ligating of each side of veins with surgical strings. To reduce the known complications as hematoma and testicular artery injuries we evaluated and compared the only ligation of vein and not cutting them for complications and outcomes with conventional technique for inguinal and sub inguinal varicocelectomy.

Methods: Between March 2010 and February 2013, 578 patients with left varicocelectomy divided in two groups. For group A (n=235) only ligation of veins and for group B (n=343) ligation and cutting the veins were done. All patients followed up for 6-24 months (mean 10 months).

Results: In group A no hematoma was seen during 24hours after surgery 11 patients (4.7%) had recurrence of varicocele but mostly with lower grade during of follow up. In group B, 6 patients had mild to moderate hematoma and 14 patients (4%) showed recurrence of varicocele (P>0.05). Improvement in semen analysis in two groups was nearly the same (78%). The mean time of surgery for group A was about 8 minutes less than group B.

Conclusions: We recommend that varicocelectomy can be done without cutting the veins and only ligation of the veins seems to be enough with less complications and time for surgery.

Key Words: Varicocelectomy, surgery, urology

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Effect of meatal stenosis on urinary tract by using Ultrasonography

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Abstract

Background: In our country meatal stenosis due to early circumcision is common. Long lasting meatal stenosis may act as bladder outlet obstruction .The aim of this study is to evaluate the effect of meatal stenosis on lower & upper urinary tract using ultrasonography (USG) .

Methods: From 2009 to 2012 eighty seven boys (3- 6 years) suffered from meatal stenosis were enrolled in this study. Diagnosis of meatal stenosis and its severity were confirmed by Nelaton catheter in all cases. Documented subjects where referred for Ultrasonography before meatoplasty. Hydronephrosis, hydroureter, bladder wall thickeningin full and empty bladder, bladder volume and residual urine were evaluated by USG.

Results: Meatal stenosis was confirmed in all subjects. Eighty three subjects (96%) had normal upper urinary tract in USG, three cases (3.5%) showed bilateral mild hyronephrosis and bladder wall thickening. In 72 subjects (82%) bladder wall thickness was increased in empty and full bladder and 52 cases (60%) had residual urine more than 20% of bladder volume after void.

Conclusions: Long term (More than 6 months) meatal stenosis could induce bladder wall thickening and increase residual urine. Early correction of meatal stenosis can prevent this complications and voiding dysfunction in future.

Key Words: Meatal Stenosis, Ultrasonography, urinary tract

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