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**In the name of GOD**

# Journal of Surgery and trauma

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**Address:** Birjand University of Medical Sciences Journal Office, Ghaffari, Ave., Birjand, I.R. Iran.

**P.O. Box:** 97175-379

**E-mail:** jsurgery@bums.ac.ir

**Tel:** +985614443041 (5533)

**Web Site:** www.jsurgery.bums.ac.ir

**Fax:** +985614440488



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انجمن جراحان ایران  
شانه فراسات

## Complications of Spinal Instrumentations

Mohamadreza Ehsaei

Associate Professor, Neurosurgery Department, Mashhad University of Medical Sciences, Mashhad, Iran.  
mreza\_ehsaei@yahoo.com

### Abstract

**Background:** In order to recognize, to evaluate and compare the common complications resulting from different techniques used in instrumentations of Thoracolumbar and lumbar spine injuries such as the pedicular screw fixation and older techniques, all Thoracolumbar and lumbar spine injured patients that consecutively underwent spinal instrumentation were recorded and evaluated during fifteen years period and the results for pedicular screw fixation is presented in this article.

**Methods:** In this study, our patients were reviewed for their complications after Thoracolumbar and lumbar spinal instrumentation and arthrodesis between March 1996 and April 2006. They were classified as general, hardware related; instrumented segments associated problems, junction level problems and balance problems related.

**Results:** Problems not directly related to instrumentations that develop during and after surgery were considered as general complications. Those problems related to the physical change of metal and screw position such as fatigue fracture or pulling out of instrument, defined as hardware related problems. Disc space narrowing greater than 3mm, pseudarthrosis and loss of reduction in the instrumented segments were considered as problems in the instrumented segments. These problems caused by severe DJD, metabolic disorders, aging and inappropriate graft or arthrodesis. Junctional problems were those pathologic changes observed in adjacent motion segments, just above or below the instrumented and fused segments because of excessive loading (adjacent level syndromes).

**Conclusions:** Evaluation of fusion construct and Integrity of hardware infused segments is primarily done different radiological techniques. Proper realignment and relief of pain with fewer complications after operation is a great achievement of the pedicular screw fixation application in carefully and properly selected. In use of this effective but demanding method to treat various spinal disorders, the benefits must outweigh the risks and judicious use of instrumentations by an experienced surgeon for specific indications should be taken into consideration.

**Key Words:** Complications, Spinal Instrumentations





انجمن جراحان ایران  
شاهه فراسات

## Frequency of brain lesion in CT scan of traumatic patient that referred to Taleghani hospital of Kermanshah 2011

Karam Ahmadi, Selah Salehi zahabi,  
Mahmood Mehrbakhsh

*M.Sc student in Anatomy, Baghiatolah University of Medical Science, Tehran, Iran.*

### Abstract

**Background:** Trauma is the most common reason in 1-34 years old. In patient with multiple trauma, the head 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 brain is a choice method. Finding lesion in brain 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 2011.

**Methods:** In this cross-sectional an descriptive study brain CT scan finding of 907 patient with brain trauma that referred to CT scan department of Taleghani hospital of Kermanshah in 2011 was evaluated. for data collection used pre-prepared tables that contain demographic data, finding of brain lesion location and location was broken and finally data with descriptive statistics were analyzed.

**Results:** The results show that 67.04 % of 907 patients were male and 32.41% were in 15-34 years olds. In this study we evaluated computed tomograms of traumatic patients, 857 (94.49%) case of 907 patients have normal brain CT scan and 50 (5.51%)case have positive finding that this finding are: 11 case (22%) had brain contusion, 10 case(18%) had epidural hematoma, 8 case (16%) had, 10 case(20%) had subarachnoid hemorrhage, 8 case(16%) had intracranial hemorrhage, 4 case (08%) had intraventricel hemorrhage and 21 case (42%) skull fracture was detected.

**Conclusions:** Due to the high frequency of normal 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:** Brain Lesion; CT scan; Trauma; Kermanshah



انجمن جراحان ایران  
شاهه خراسان

## Methyl-phenidate effect in sever head trauma outcome: A randomized double blind clinical trial.

Panahbekhoda MH, Meybodi B

Trauma Research Center, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.  
trc@ssu.ac.com

### Abstract

**Background:** Methyl-phenidate is a dopaminergic nervous system stimulator with mild noradrenergic effect. The effect of methylphenidate on Level of consciousness in severely head injured patients was studied.

**Methods:** In a randomized double blind clinical trial, 90 cases randomly assigned in case (n=45) or control group (n=45) and received methyl phenidate 0.3 mg per kg (maximum 20 mg per day), at the 2nd day after admission. Control group received the same amount of saline (placebo). GCS and GOS scores at the admission and the end of the 1st and 2nd week and also duration of ICU stay in two groups were compared.

**Results:** Mean GCS scores at the baseline in case group was  $5.5 \pm 0.6$  and at the end of the 1st week  $7.3 \pm 1.1$  and the end of the 2nd week  $13 \pm 1.7$ . Mean GCS score at the baseline in control group was  $5.4 \pm 0.5$  and at the end of the 1st week  $6.9 \pm 0.9$  and at the end of the 2nd week  $9.2 \pm 2$  ( $P < 0.05$ ).

Mean GOS scores of case group at the end of the 2nd week was  $4 \pm 0.8$  while  $3.6 \pm 0.6$  in control group ( $P < 0.05$ ).

Mean duration of ICU stay in case group was  $5.3 \pm 1.6$  days while  $7.2 \pm 1.5$  days in control group ( $P < 0.05$ ).

**Conclusions:** It sounds Methyl phenidate significantly increases levels of GCS and GOS and also reduces the duration of ICU stay in head trauma patients.

**Key Words:** Head injury; treatment outcome; Methyl phenidate



انجمن جراحان ایران  
شاهه خراسان

## One Segment Lumbar fusion with use of standalone TLIF cage

Hamid Etemadrezaie, Samira Zabihiyan, Masood Rasti, human Baharvahdat, Ali Etemadrezaie

Mashhad University of Medical Sciences (MUMS)

### Abstract

**Background:** In contrast with cervical area Application of Standalone cage in Lumbar area for interbody fusion has not been accepted world wide. But clinical experiences show at least two groups of patients who are at high risk for instability may benefit from interbody fusion with standalone TLIF cage without using pedicular screw system. in comparison with the classic approach using pedicular screw with cage this approach has shorter surgery time, less risk of complications and is more cost benefit.

**Methods:** We studied two group of patients admitted from January 2007 to January 2011; in Neurosurgery Department of Mashhad university of medical sciences. Mashhad- IRAN. First group were Patients with unilateral recurrence of lumbar disk herniation at the same level and the same side of previous operation and the second group suffer from spondylolisthesis grade 1or 2 with unilateral radicular symptoms. The ODI and VAS scores were evaluated before and 3, 6, 12, 24, mounths after unilateral standalone TLIF cage application. Post operative radiographic fusion score based on Brantigan and Stefee criteria assessed and statistical analysis was performed.

**Results:** From 26 patients in this study 14 patients had recurrence of Lumbar disk herniation, 12 patients had spandylolisthesis. The most common space for disk disease was L<sub>4</sub>-L<sub>5</sub> and for spondylolisthesis was L<sub>5</sub>-S<sub>1</sub>. Postoperatively VAS and ODI was reduced significant relative to preoperative values. The mean ODI before surgery and 2 years after that was 30.34 and 13.43 (P<0.001) the mean VAS before and 2 year after surgery was 6.40 and 2.01 (P<0.001).

**Conclusions:** After 2 year follow up it was demonstrated that standalone TLIF cage in selected cases is effective and safe. Pain and function will obviously improve. No,cage pull out or pseudoarthrosis was seen.

**Key Words:** Standalone cage, Lumbar, Interbody Fusion



انجمن جراحان ایران  
شانه فراسات

## Spinal hydatid cyst causing spinal cord compression

Faraji M, Mashadinajhad H, Farajirad E

### Abstract

**Background:** Primary spinal hydatid disease is rare and represents an uncommon but significant manifestation of hydatid disease. Over the past 20 years, 15 cases of spinal hydatid disease (9 men 6 woman) were diagnosed and treated at our department, with an average follow-up of 9 years. Hydatid disease of the spine is a rare condition with a poor prognosis that presents diagnostic and therapeutic challenges.

**Methods:** The patients were evaluated clinically, using CT and MRI imaging available in our hospital. Decompressive surgeries were performed and the diagnosis was confirmed by histopathologic examination. All patients received long-term antihelminthic therapy with 400 mg of albendazole 3 times daily for 1 year.

**Results:** After surgery, all patients improved; however, over time, recurrence and residual disease were observed. 12 patients had complete neurologic recovery at follow-up at 2 to 3 years, although there were radiographic signs of recurrence. The other 3 patients did not achieve complete neurologic recovery despite anterior decompression; they developed recurrent disease and the neurologic status deteriorated to spastic paraplegia. All patients refused further surgeries for recurrences and 2 patients died of complications of paraplegia.

**Conclusions:** Diagnosis was challenging, eradication was difficult, and hydatid disease recurred in all 15 patients. In our experience, morbidity and mortality were high and prognosis was poor.

**Key Words:** Hydatid cyst of spine; Extradural; Hydatid disease; Infectious; Paraplegia; Spinal



انجمن جراحان ایران  
شاهه فرسات

## Distribution of surgical problem at birth in Imam Reza hospital deliveries

Ashraf Mohammadzadeh, Ahmad Shahfarhat

*Professor of Neonatology, Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran Email: mohammadzadeha@mums.ac.ir*

### Abstract

**Background:** Congenital malformation which led to surgery of due to mal development of organs. The diagnosis is based on clinical exam and the radiography. The aim of this study was to determine frequency distribution of surgical cases at birth in Imam Reza hospital deliveries Mashhad, Iran.

**Material & Method:**

In retrospective descriptive study for 10 months since 1.8.1391 all deliveries in our maternity hospital were elected. During this period there were 11 documents of surgical cases admitted to NICU. Then data were analyzed.

**Methods:** During 10 months 2264 births were occurred in this hospital. Eleven surgery cases were admitted to NICU. Therefore surgery cases occurs 4.8 in 1000 live births. Two of eleven (18%) were low birth weight, 4 newborns (36%) were male. Four of 11 (36%) cases were related to gastrointestinal organ, 4 (36%) CNS as neural tube defect, 1 (18%) diaphragmatic hernia and 1 (10%) had abdominal mass. All 4 cases of gastrointestinal organ were in last 5 months of year (cold days).

**Results:** As our hospital is referral one, distribution of surgery cases is in moderate rate and the most common involved organs were gastrointestinal and CNS. Surgical cases were more prevalent in females. All Obstructive lesion of gastrointestinal organ were in cold days.

**Conclusions:** As our hospital is referral one, distribution of surgery cases is in moderate rate and the most common involved organs were gastrointestinal and CNS. Surgical cases were more prevalent in females. All Obstructive lesion of gastrointestinal organ were in cold days.

**Key Words:** Congenital malformation; Surgery at birth; Neonatal intensive care unit



انجمن جراحان ایران  
شانه فراسات

## Probability of miss diagnosis about esophageal foreign body impaction

Mehdi Fathi, Marjun Judi

*surgery, Pediatric surgery, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** Esophageal foreign body impaction (EFBI) is a common accident in children. It may be partly due to swallow reflexes disharmony in these patients.

**Methods:** we evaluated 64 cases who had EFBI within 10 years. Their age was 6 month to 14 years old. (33 M & 31 F). Symptoms and signs were sialorrhea, dysphasia, feeding refusal, respiratory distress and use of accessory respiratory muscles in 5 cases.

**Results:** Posterolateral and lateral CXRs showed bilateral hyperinflation. Esophageal foreign body found in 48 cases. In 27 cases at upper, in 7 cases at mid and in 30 cases at lower region of esophagus. Tracheal impaction suspected in 5 cases initially who bronchoscopy showed airways were clear, esophageal foreign body found after 24 hours when we did esophagoscopy for them. Esophageal perforation did not occur. Esophageal membranous laceration and self limited hemopatch found in 14 cases. Burning damage (degree 1) found in 2 cases. Aspirated objects included coins, toys particles, batteries, nuts and food particles.

**Conclusions:** we suggest our colleagues since symptoms and signs of esophageal foreign body impaction may be as the same as tracheal impaction to try esophagoscopy in any patients who referred with tracheal foreign body impaction whenever they didn't find anything in bronchoscopy.

**Key Words:** Foreign body; Impaction; Miss diagnosis



انجمن جراحان ایران  
شاهه فراسات

## Comparison effects of magnesium sulfate and placebo in prevention of shivering during spinal anesthesia in cesarean section

Dastkhosh A, Alipour M

*Assistant Professor of Anesthesiology, Department of Anesthesiology and Reanimation, Ghaem Hospital, Mashhad University of Medical Science, Mashhad, Iran.*

### Abstract

**Background:** Shivering after Spinal is the result of impaired thermoregulation and cause to increase tissue oxygen consumption, minute ventilation and heart work. Select the appropriate medication to reduce shivering with minimal side effects on mother and newborn and lowest risk of side effect in cesarean section is important.

**Methods:** Pregnant women at a constant temperature room after spinal anesthesia in a similar manner for cesarean divided into 2 groups, patient received 30mg/kg magnesium sulphate in 50 cc normal saline in group Mg (maximum 4gr magnesium) and 50cc normal saline in group C over 30 minutes. Vital signs, temperature, shivering and tympanic temperature before and after spinal anesthesia were measured every 15 minutes.

**Results:** 80 patients were divided into two groups that have similar age, weight, vital signs before surgery (MAP, HR, SaO<sub>2</sub>) and duration of surgery between two groups. Incidence of hypotension, bradycardia, PONV and intake of drugs for treatment of them were equal between the two groups.

Shivering in minutes 15, 30, 45 in two groups did not differ but in minutes 60, 75 and 90 it was increased in the control group and use of pethidine to treat shivering in both groups was similar.

A significant difference was proved between groups in body temperature during surgery.

**Conclusions:** The use of intravenous magnesium during spinal anesthesia can maintain body temperature higher so reduce shivering during or after surgery without increasing in adverse reaction.

**Key Words:** Cesarean section; Shivering; Spinal anesthesia; Magnesium sulfate



انجمن جراحان ایران  
شانه فراسات

## Comparison of buprenorphine with morphine for postoperative complications in orthopedic surgeries.

Ghasem soltani, Nahid zirak,  
Alireza sepehri shamlo, Mahmoud khorsand

Cardiac Anesthesia Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** Pain is one of the most common complication after orthopedic surgeries. The aim of this research was to compare Buprenorphine with Morphine to relieve pain after the Orthopedic surgery.

**Methods:** In this clinical trial all patients who were candidated for orthopedic surgery (Closed Reduction-pinning) and referred to the Imam Reza hospital in Mashhad if they were satisfied for the study, and over 18 years of age, were enrolled into this study. The main exclusion criteria were: previous allergy to buprenorphine and morphine; addiction to narcotic, alcohol, benzodiazepines; history of analgesic use in the past 24 hours. The sample size in each group (Morphine and Buprenorphine) was 45. To the patients in the Morphine group, 0.2 mg/kg as intravenous Morphine (maximum ten mg) before induction of anesthesia and in the Buprenorphine group, 4.5 mcg/kg Buprenorphine(maximum one mg) as sublingual, 30 minutes before induction of anesthesia was given. The two groups were under a same general anesthesia and until 12 hours after surgery, the pain and side effects of drugs (nausea-vomiting-itching-urinary retention) were evaluated.

**Results:** The two groups were matched for age, sex, duration of surgery, and preoperative hemodynamic variables ( $P=0.27$ ). Also puls rate reduction had a significant difference between two groups ( $P<0.001$ , Buprenorphine group was 78 versus 81 in the morphine group) but mean arterial pressure was not significantly different between these two ( $P=0.6$ ). Among the four major side effects in this study, only itching (in recovery) was significantly different between the two groups ( $P=0.01$ , 26.7% in the morphine group versus 6.7% in the buprenorphine group). Nausea and vomiting in both groups showed no significant difference in recovery ( $P=0.6$ ) and the level of consciousness on admission and 30 min after entering to the recovery in the buprenorphine group was significantly higher ( $P=0.001$ ) but there was no were significantly different between groups at 3, 6 and 12 hours after admission to the recovery. Finally the pain was 2.5 score in average higher in buprenorphine group than the morphine group ( $P<0.001$ ).

**Conclusions:** The use of buprenorphine compared to morphine can lead to greater control of pain and also lower incidence of complications and drug side effects after orthopedic surgeries.

**Key Words:** Buprenorphine, Morphine, Postoperative Complications, Orthopedic Surgeries





انجمن جراحان ایران  
شأنه نشریات

## Comparison of the efficacy of midazolam vs. ondansetron in preventing Post operative nausea and vomiting in gynecologic laparoscopic surgeries: double-blinded randomized clinical trial study

Nahid zirak, Leili hafizi, Ghasem soltani, Arash peyvandi, Alireza sepehri shamlo

Cardiac Anesthesia Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** Post operative nausea and vomiting (PONV) can be seen more commonly in women and especially in gynecologic and laparoscopic surgeries. One of the drugs suggested as a pre-treatment is midazolam.

This study investigated the effect of midazolam in reducing post operative nausea and vomiting in comparison with ondansetron.

**Methods:** In this double blind randomized clinical trial 80 patients who were met inclusion and exclusion criteria were randomly allocated in two equal groups of 40, each receiving either midazolam (received 15 mg/kg during induction of anesthesia) or ondansetron (4 mg IV, 15 min before extubation). Information regarding occurrence of nausea and vomiting in 0, 2, 6 and 24hours after extubation were recorded in a questionnaire.

**Results:** The nausea score in the recovery, 2, 6 and 24 hours after extubation, was not significantly different between the two groups. Frequency of vomiting was higher in midazolam group than ondansetron group at 2 and 6 hours post recovery, but was the same at 24 hours.

**Conclusions:** Although midazolam premedication was not more effective than ondansetron in reducing postoperative nausea and vomiting but in many intervals the effect was similar to ondansetron; in which justifies its use with other anti-nausea medications

**Key Words:** Nausea; Vomiting; Laparoscopic; Gynecologic; Midazolam



انجمن جراحان ایران  
شانه فراسات

## Introduction to surgical navigation system and its applications in endoscopic surgery

Moghadam AD, Haddadnia J, Yazdi MS

*Graduate Student of Biomedical engineering, Hakim Sabzevari University, Sabzevar, Iran, Center for Research of Advanced Medical Technology, Sabzevar University of Medical Sciences, Sabzevar, Iran.*

### Abstract

In recent years a new approach, called minimally invasive surgery has been welcomed that in addition to create enormous development in surgical field corrected an important part of this field such as defects and aggressive face. Minimally invasive surgeries usually done through body ducts or small holes on skin and have very fewer damages and side effects for patients. The major problem of these methods compared to open surgeries is losing surgeon's vision of the endoscope's position and/or other surgical instruments inside the body. So in these methods surgeon needs more experience and the chance of damaging to sensitive tissue increases significantly. To solve this problem, in recent years surgical navigation systems have been devised. A prototype of this system also made and used in Iran in 1390. Estimation the position of surgical instruments inside the body and showing it on pre-operative images that taken from same patient is the main task of surgical navigation system. Experiments shown that surgical navigation systems increase quality of endoscopic surgeries and cause to minimize side effects in patients. So these systems will be one of the most important needs of all operating rooms in the near future. Due to the rapid advancement of this technology and the medical community and especially surgeon's need for familiar with this system, in this section, various part of surgical navigation system, how it works and some of their advantages has been discussed and reviewed.

**Key Words:** minimally invasive surgery, endoscopic surgery, surgical navigation system



انجمن جراحان ایران  
شاهه خراسان

## Evaluation the various methods for detecting gastrointestinal leakage after bariatric surgery

Ali Jangjoo<sup>1</sup>, Abdolreza Pazouki<sup>2</sup>

<sup>1</sup> Associate professor in Laparoscopic Surgery, Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>2</sup> Assistant professor in Laparoscopic Surgery, Minimally Invasive Research Center, Tehran University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** The patient underwent Roux-en-Y gastric bypass are prone to GI leakage from stapler lines or the site of anastomosis. Early diagnosis is vital for proper management. Clinical diagnosis of GI leakage is very difficult in obese patients. The methods are used for leakage are intraoperative air leak test, postoperative methylen blue leak test and postoperative upper GI gastrograffin study. In this study we will evaluate the efficacy of these methods for early diagnosis.

**Methods:** The morbid obese patients who underwent Roux-en-Y gastric bypass routinely underwent air leak test at the end of operation. The sites of leakage were oversewed with stitch or staples. In otherwise patient they underwent methylen blue and upper GI gastrograffin leak test.

**Results:** From 2010-2013, 125 patient with BMI of more than 40 or in cases of associating co morbidities and BMI more than 35 underwent Roux-en-Y gastric bypass or sleeve gastrectomy in Imam Reza Hospital. All of the leak tests were done in all patients.

Intraoperative air leak test was positive in two patients. The leakage was from anastomosis line and oversewed at the same time. All postoperative investigations were negative in these patients.

Methylen blue leak test was positive in 3 patients. Upper GI gastrograffin study was negative in two of them. Two cases underwent conservative treatment and one patient reoperated.

Gastrograffin leak test was positive in one other case. All of other studies were negative in this patient. She observed and underwent methylen blue and gastrograffin leak test and were negative.

**Conclusions:** GI leakage is a challenge for bariatric surgeons. There isn't any definitive test for ruling out the leakage. The various methods of checking the leakage have false negative or false positive results. Based on this study intraoperative air leak test was negative in 3 patients. Upper GI gastrograffin leak test was negative in 2 patients. In otherwise it was false positive in one patient.

It seems that rely on one test for detecting leak is unreasonable. We suggest all leak tests for all candidates of bariatric surgery.

**Key Words:** Gastrointestinal Leakage; Bariatric Surgery



انجمن جراحان ایران  
شاهه خراسان

## Iatrogenic Ureteral Injury in Laparoscopic proctoColectomy

Abdollahi Abbas<sup>1</sup>, Shabahang Hosseini<sup>2</sup>, Maddah Ghodratollah, Jangjoo Ali<sup>1</sup>,  
Ravankhah M<sup>2</sup>, Kh Yousefi Y<sup>2</sup>

<sup>1</sup> surgical oncology research center Mashhad University of Medical Sciences

<sup>2</sup> surgical endoscopic research center Mashhad University Of Medical Sciences

### Abstract

**Background:** Increasing use of laparoscopic surgery in colorectal cancer has led to reports of numbers of Ureteral Injury after such procedures.

Laparoscopic proctocolectomy is a safe operation. However, the ureteral can be injured during resect colon and rectal cancer. We reviewed incidence this complication

**Methods:** In a retrospective study (between 2011 and 2013) patients with laparoscopic proctocolectomy diagnosis were involved.

**Results:** laparoscopic proctocolectomy for colorectal cancer was performed on 95 patients between 2011 and 2013, including 38 females, 57 males with mean age of 54 years. The mean operating times 240 min, and blood loss < 230 ml. Protective ileostomy or colostomy was performed for 50 patients. Four weeks after operation stoma was closure. The median hospital stay was 5 (range 5-14) days. Ureteral injury in one patient was seen.

**Conclusions:** laparoscopic proctocolectomy can be safe operation and overall incidence of ureteral injury is low in colorectal laparoscopy. Prevention of ureteral injury can be achieved by attention to the location of the ureter during the operation.

**Key Words:** Colo Rectal Cancer; Laparoscopy; Ureteral Injury



انجمن جراحان ایران  
شأنه غرسان

## Laparoscopic ureteroureterostomy for iatrogenic ureteral stricture

Mohammad Aslzare, Mohammadreza Darabi, Amiabbas Asadpour

Assistant Professor of Urology, Department of Urology, Mashhad University of Medical Science, Mashhad, Iran.

### Abstract

**Background:** Many of the ureteral strictures are managed by endourologic techniques, including balloon dilatation and endoureterotomy. Some patients requires surgical excision and repair. Surgical considerations critical to successful repair include preservation of the vascular supply, adequate ureteral mobilization, and construction of a watertight and tension-free anastomosis. Although many ablative, laparoscopic techniques are established procedures, reconstructive laparoscopic procedures are still evolving. This is mainly due to the complexity and technical skill intensity inherent to such procedures. Purpose In this report, we present our experience with laparoscopic ureteral reconstruction by primary end-to-end anastomosis for treatment of ureteral stricture.

**Methods:** A 46 year-old man with right flank pain, hydronephrosis and proximal ureteral stricture on IVP and history of laparoscopic ureterolithotomy, candidate for surgery. Laparoscopic ureteroureterostomy was performed transperitoneally with 4 ports. The right colon was mobilized and a large amount of fibrosis was found to be encasing the ureter. Laparoscopic ureteral exploration was done meticulously. After excision of the stricture, the ends of the ureter were spatulated and then reanastomosed using a 4-0 vicryl sutures that placed full thickness. A stent was placed. An abdominal drain and Foley catheter were left indwelling. Patient was discharged postoperative day 3 and the stent was removed 6 weeks postoperatively.

**Results:** Operative time was 180 min. No conversion to open surgery was necessary and there were no complications. Bleeding was minimal. The IVP showed excellent patency of the repair.

**Conclusions:** Laparoscopic ureteroureterostomy is a potential treatment option for ureteral strictures in carefully selected patients. Laparoscopic ureteroureterostomy is technically feasible and efficacious in treating ureteral stricture.

**Key Words:** Laparoscopic ureteroureterostomy; Iatrogenic ureteral stricture



انجمن جراحان ایران  
شأنه غرارات

## Assessment of surgical site infection risk factors at Imam Reza Hospital, Mashhad, Iran between 2006 and 2011

Mohammad Reza Motie<sup>1</sup>, Majid Ansari<sup>2</sup>, Hamid Reza Nasrollahi<sup>3</sup>

<sup>1</sup> Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** The present study was conducted to establish the patterns and risk factors of surgical site infections in our institution between 2006 and 2011.

**Methods:** This was a retrospective cross sectional study. The SSI was identified based on the presence of ICD-10-CM diagnostic code in hospital discharge records. By using a standardized data collection form predictor variables including patient characteristics, preoperative, intra-operative and postoperative data were obtained.

**Results:** Ninety five patients fulfilled the inclusion criteria. The patients were admitted for various procedures including both elective (62.1%) and emergency (37.9%) operations. Colectomy (13.7%) was the leading procedure followed by umbilical herniation (12.6), appendix perforation (12.6%). The mean age was 47.13 years with standard deviation of 19.60 years. Twenty percent were addicted to opium. Midline incision above and below the umbilicus (40%) had the highest prevalence of infection. Most patients (46.3%) had cleancontaminated wounds and 30.5% had contaminated wounds. The quantitative variables which were also measured include duration of surgery, pre-operative and post-operative hospital stay with the mean of  $2.9 \pm 1.45$  hours,  $1.02 \pm 1.42$  and  $7.75 \pm 6.75$  days respectively. The most antibiotics prescribed post-operatively were the combination of ceftriaxone and metronidazole (51.6%).

**Conclusions:** The contaminated and clean-contaminated wounds are associated with higher rate of SSIs. Also, there is a converse relation between length of surgical incision and rate of SSIs. In overall, we found type of surgery as the main risk factor in developing SSIs.

**Key Words:** Risk factor; Surgical Wound Infection; Contamination; International Classification of Diseases



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شأنه نشریات

## Attitudes of physicians to futile treatment at the end of life care

Seyyed Hasan Adeli<sup>1</sup>, Ebrahim Shahryari<sup>2</sup>, Mostafa Vahedian<sup>3</sup>, Ehsan Jangholi<sup>4</sup>,  
Mohammad Gharehbeglou<sup>2\*</sup>, Mahdi Mesgaranzadeh<sup>2</sup>, Mohammad Javad  
Qasemzadeh<sup>2</sup>, Ghahraman Ahdi<sup>2</sup>

<sup>1</sup> Pulmonologist, Clinical Research Development Center, Qom University of Medical Sciences, Qom, Iran;

<sup>2</sup> Department of Medicine, Qom Branch, Islamic Azad University, Qom, Iran;

<sup>3</sup> Master of Epidemiology, Clinical Research Development Center, Qom Medical Science University, Qom, Iran;

<sup>4</sup> Young Researchers Club, Islamic Azad University, Tehran Medical Branch, Tehran, Iran.

### Abstract

**Background:** Medical futility in the care of a patient is referred to a case in which interventions for prevention, diagnosis, treatment, rehabilitation and other medical purposes, it is useless for the patient.

**Methods:** This cross-sectional study was performed on 200 physicians serving in Medical Educational Centres in Qom, Iran from March 2011 to April 2012. Data collected from the questionnaire was twofold as follows: Part I and Part II contains demographic information and physicians' attitudes to futile treatment, respectively. Data analysis and statistical test Chi-square and test and one-way ANOVA was performed using SPSS version 16.  $P < 0.05$  showed the statistical significance.

**Results:** In this study, 200 physicians, including 51 (5/25%) women and 149 (5/74%) were male. The mean age of physicians was  $41.3 \pm 7.8$  years. According to data on scores earned by all physicians after scoring from 0 to 25 the total of options according to the doctors at least 11 points and maximum 25 points received, the mean and standard deviation of the total score obtained in this study was  $19.5 \pm 3.1$ . Difference between the mean male and female physicians' attitudes score toward futile treatment was significant ( $P < 0.05$ ). Between age and work experience with the attitude there was positive correlation but not statistically significant. Between education and the workplace no statistically significant relationship was found.

**Conclusions:** Considering the results of this study, there was a tendency to reduce exerting inappropriate treatments and futile procedures between health care professionals (HPCs) in Iran.

**Key Words:** Futility; Medical; Physicians; Health care



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شاهه خراسان

## Chronic Anal fissure; Medical Treatment Vs Surgical Spinchterotomy, A comparison Study

Moti M, Hashemi P

*Associate professor of surgery, Department of General Surgery, Imam Reza Hospital, Mashhad University of Medicine,  
Mashhad, Iran;*

### Abstract

**Background:** to determine whether the medical Treatment of anal fissure can be an effective alternative for surgery

**Methods:** Retrospectively, we randomly selected 190 Patients being treated for anal fissure between the years 2005-2010 in 3 equal groups: group A:patients who received medical treatment with topical nitroglycerin, group B:patient treated with topical Diltiazem, and group C: Patients undergone Surgery. The results were then correlated with the statistical program SPSS using Ki square test.

**Results:** main complains of the patients were first anal pain and then bleeding. response of treatments for relieving pain was:74%in A,84% in B, and 98% in group C. response of treatments for fissure healing, in order of groups A,B&C was: 70% ,83% and 94%.

**Conclusions:** results of medical treatment of anal fissure with topical Nitroglycerin or diltiazem are comparable to those of patients undergone surgery, and so it can be considered as an alternative for surgery

**Key Words:** nal fissure; diltiazem ointment; lateral internal sphinctrotomy





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## Damage control surgery (DCS) and Surgical strategies for management of complex abdominal problems Maddah Ghodratollah<sup>1</sup>, Abdollahi Abbas<sup>1</sup>, Shabahang Hossein<sup>2</sup>

<sup>1</sup>Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>2</sup>Surgical Endoscopic Research, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** Emergency abdominal surgery from both traumatic and non traumatic etiologies can lead to situations in which the abdominal wall cannot be closed primarily. Many techniques have been reported for temporary coverage of the exposed viscera but the result of various techniques remains unclear.

**Methods:** During 94 months ended in 2012, we have treated 22 critically ill patients who had an open abdomen using plastic bags (Bogotá bag). The study included 22 patients (12) male and (10) female with an average age of 35 year.

The main indications for temporary abdominal coverage were as follows: planned reoperation in 13 patients, subjective judgment that the fascia closure is too tight in 7 patients, damage control surgery in one patient and development of abdominal compartment surgery in one patient. Surgical conditions requiring temporary abdominal closure were severe post operative peritonitis in 9 patients, post operative intestinal fistula in 6 patients, post traumatic intra abdominal bleeding in 3 patients and intestinal obstructions in 4 patients.

**Results:** Length of hospitalization was  $45 \pm 23.25$  days and the mean total number of laparotomies was  $6.2 \pm 3.75$  times per patient.

Three bowel fistulas occurred due to a missed injury at the time of initial operation that was discovered during changing the plastic sheet. They were unrelated to coverage technique. All of them were treated by repair of the defect and serosal patch by adjacent bowel loop. Only one patient underwent definitive closure within 6 months of initial operation. The remaining survivor has declined to have hernia repaired.

There were 5 early postoperative deaths that were not related to the abdominal coverage technique. Also there were 7 late deaths that were due to dissemination of malignancy with a mean survival time of  $20.8 \pm 13$  (range 2-54) months. Currently 10 patients are alive at a follow up of 45 months.

**Conclusions:** The Damage control surgery principle is often applied to the management of complex abdominal problems. This group of patients has a high morbidity and mortality.

**Key Words:** Damage control surgery (DCS); Open abdomen; Planned relaparotomy



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## Modified multivisceral transplantation following abdominal trauma in acute setting: a Case Report

Mohsen Aliakbarian<sup>1</sup>, Saman Nikeghbalian<sup>2</sup>,  
Seyed Ali Malekhosseini<sup>2</sup>

<sup>1</sup> Surgical Oncology Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>2</sup> Shiraz Transplant Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.

### Abstract

**Background:** Approach to abdominal trauma has been changed through its course over the years and more changes are expected considering new researches and experiences in surgical field. Organ transplantation has emerged as one of the effective modalities in the management of abdominal trauma victims and recent developments in the field of transplantation have introduced new concepts in the treatment of trauma patients.

**Methods:** Herein, we report modified multivisceral transplantation as management in abdominal trauma victim in the acute setting.

50 years old gentleman sustained blunt abdominal trauma due to motor vehicle crash in July 2011. He underwent exploratory laparotomy in peripheral hospital in the same day of trauma; severe bleeding from the base of the small bowel mesentery was controlled by mass ligation and through and through suturing. Afterward patient was transferred to our center. Second exploratory laparotomy was carried out immediately after admission (12 hours after the first one). We found ischemic bowel (small intestine and right colon) with severe trauma to the pancreas). Decision was taken to remove the severely injured organs and multivisceral transplantation as the only possibility.

Resection of the whole small bowel, pancreas, spleen, stomach and extended right hemicolectomy was done. Next day graft was available from a 23-year-old deceased donor, victim of a motor vehicle accident. Exploration was done and modified multivisceral transplantation was carried out (including the stomach, pancreaticoduodenal complex and small bowel). The patient was discharged after 50 days and he is now under follow up.

**Results:** Abdominal trauma has no single pattern; therefore management of trauma victims had a variety of principles and methods ranging from conservative – non operative – management up to transplantation. In acute trauma setting – as in our patient – type of procedure and organs to be involved depends on operative laparotomy findings and the status of vascularity of the organs, hemodynamic stability of the patient, comorbid diseases and physiological changes that follow trauma.

**Conclusions:** Timing of transplant surgery need to be addressed, that is to say it is wise to transplant patient if it is possible in the acute setting or to wait and start the patients in other measures, i.e. TPN for intestinal failure, insulin and enzyme extract for pancreatic failure, and get the patient out of the acute trauma phase and then schedule the patient for transplant surgery.

**Key Words:** Transplantation; Abdominal Trauma; Case Report



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## Social support evaluation in breast cancer patients: a case-control study

Abbas abdollahi

*Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** Breast cancer is the most common cancer in women and it has a great burden in the society. Many psychological and social factors could affect these patients and one of the most factors is patients perceived social support. This study was designed to evaluate patients social support.

**Methods:** This was a case-control study which was done on 140 women who were included in 2011-2012 from Laleh hospital in Tehran. 70 patients had breast cancer and 70 were healthy participants. Age was matched between groups. Multidimensional Scale of Perceived Social Support (MSPSS-P) questionnaire was used for social support evaluation in participants.

**Results:** Mean age in breast cancer group was  $52.48 \pm 7.25$  years and mean age in control group was  $51.37 \pm 7.46$  years ( $P=0.783$ ). Mean family support score in case group was  $18.23 \pm 3.12$  and in control group was  $15.48 \pm 3.23$  ( $P=0.038$ ). Mean friends support score in case group was  $14.87 \pm 2.56$  and in control group was  $15.28 \pm 2.63$  ( $P=0.648$ ). Mean significant other support score in case group was  $15.58 \pm 2.68$  and in control group was  $14.08 \pm 2.52$  ( $P=0.738$ ).

**Conclusions:** According to our results patients had a supportive family and this could be because of our traditional and religious culture in Iran. This support could help patients to recover their quality of life. Psychological factors should be considered by surgeons during their treatments for women with breast cancer.

**Key Words:** breast; cancer; social support



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## Surgical and Non-surgical management of post-Endoscopic retrograde cholangiopancreatography (ERCP) perforations and related injuries

Abdolahi AB<sup>1</sup>, Maddah GH<sup>2</sup>, Shabahang H<sup>2</sup>, Tavassoli AR<sup>2</sup>, Rajabi MT<sup>2</sup>, Ravankhah M<sup>2</sup>, Kh Yousefi Y<sup>2</sup>, Barband R<sup>2</sup>

<sup>1</sup>Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>2</sup>Surgical Endoscopic Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** ERCP has evolved from a diagnostic tool to primarily therapeutic procedure. ERCP has a relatively high complication rate of nearly 10% and a mortality rate of 0.1 to 1%. As therapeutic aspects of ERCP are becoming more important and endoscopists take on increasingly more complex cases, the risk of complication is increasing. Although pancreatitis, cholangitis and hemorrhage are more frequent ERCP complications. ERCP related perforation is one of the most feared, due to its potentially lethal nature. The aim of this study was to determine outcomes of surgical and Non-surgical treatment for patients who has post-ERCP perforations and related injuries.

**Methods:** Patients who underwent ERCP and sustained a periduodenal perforations and related injuries such as hematoma, between July 2011 to October 2013 were reviewed at a tertiary referral center Ghaem in Mashhad, Iran. Data about this patients and outcomes of the treatment options used were retrospectively analyzed.

**Results:** During the period from July 2011 to October 2013, 505 ERCP procedures were done in our hospital. Twelve of these patients (2 male, 10female) had a perforation. The mean patient age was 54.6 years. (Range 22-75 y). During the procedure, injury was suspect in 8 patients (66.6%), it passed unnoticed in the remaining 4. Diagnostic ERCP was performed in 5 patients (41.6%) and therapeutic ERCP in 7 (58.3%). The decision to operate or follow a conservative policy was based on a combination of clinical and radiological findings. Conservative management was employed in 50% (6 patients) which was successful in 83.3% of the cases. 6 patients were treated with surgical procedure. Operative management consisted of one primary repairs, two pyloric exclusions and drainage and Tree cholestectomy and choledochal exploration and T-Tube insertion. A total of 6 patients died (50%).

**Conclusions:** Post-ERCP periduodenal perforations and injuries divided to different categories. Certain types require surgery repairmen while others should be treated conservatively. The choice of the management depending on the findings from physical examination– clinical picture and radiological findings. The most important factors for better outcomes were early recognition and appropriate intervention. Type of injuries and abdominal inflammation should be kept in mind in decisions for surgical or Non-surgical treatment. The present of periduodenal fluid collection, contrast extravasations or free intra peritoneal air were decisive factors for performing laparotomy.

**Key Words:** Management; ERCP; Injuries; Perforations



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## Surgical management of the complications of ERCP

Ali Jangjoo<sup>1</sup>, Mostafa Mehrabi Bahar<sup>2</sup>

<sup>1</sup>Associate Professor of Minimally Invasive Surgery, Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>2</sup>Professor of Surgery, Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** ERCP is widely used for diagnostic and therapeutic purposes. It can show the bile duct pathologies. It includes bile duct stones, strictures, tumors and cyst. In conjunction with endoscopic sphincterotomy (ES) it can extract the bile duct stones, decompress the bile duct in cholangitis and decompress the pancreatic duct in pancreatitis. It also can decrease the bile duct pressure and decrease the time of biliary fistula closure.

In spite of these advantages it can cause pancreatitis, duodenal wall rupture resulting peritonitis or retroperitoneal abscess. In the cases of pancreatitis conservative management is choice. But in the case of duodenal wall rupture surgical intervention is mandatory.

In this study we will review the results of surgery in patients referred with the complications of ERCP and ES.

**Methods:** We reviewed the files of the patients consulted for ERCP complications. In a period of 5 years we admitted 25 patients in our ward. All of them were women with median age of 34 (14-59) years old. The patients consulted for GI bleeding, retained, sphincterotomy, sepsis and peritonitis. All patients underwent abdominal exploration through midline incision. In the cases of peritonitis one case had gastric wall perforation and one case had retroperitoneal duodenal wall rupture. These two patients underwent primary repair of the gastric wall and T tube drainage of the duodenum. In the case of retained sphincterotomy it was palpable through duodenal wall. After doing an extended Kocher maneuver and handling the duodenum with two stay it was opened longitudinally over the palpated sphincterotomy. In one case the wire had ruptured and introduced to the duodenal wall. In other case the inspissated stone in the wire pretended its extraction. By cutting the wire the sphincterotomy were expelled through the mouth. In other cases for better finding the site of ampulla of water first of all we opened the common bile duct and by introducing a nasobiliary drain to the bile duct duodenal wall opened as the previous cases. By extracting the tip of the drain through the ampulla of water and pulling it up we can see and explore the site of ES. Bleeding vessels were cauterized or oversewn with 3-0 silk sutures. In the case of perforation the site of perforation is in medial side of duodenum by extending the sphincterotomy site through the duodenal wall. In these cases after doing debridement of braided tissue, the mucosa of the bile duct and adjacent duodenum were explored with the guide of intrabiliary drain. The site of perforation at the bottom of the sphincterotomy can be explored. The operation completed with sphincteroplasty. We sutured the duodenal mucosa to the biliary mucosa. In the case of periampullary carcinoma the site of bleeding sutured and choledochoduodenostomy was done. In the cases of opened biliary duct T tube were used. The duodenal wall closed transversely. The retroduodenal area was drained. All patients were discharged and we hadn't any mortality and fistula.

**Results:** In a period of 5 years we admitted 25 patients in our ward. All of them were women with median age of 34 (14-59) years old. ES were done for bile duct stone in 24 cases and obstructing periampullary carcinoma in 1 case. 9 patients had history of previous cholecystectomy. Four patients were consulted for massive upper GI bleeding, 2 patients for retained sphincterotomy and 19 other patients for peritonitis and abdominal discomfort. Of these patients 4 patients had retroperitoneal rupture and abscess and others had frank peritonitis. All patients underwent abdominal exploration. Early diagnosis and early



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intervention is all of thing that we should do. After abdominal exploration the factors that determine the outcome are the extent of infection, the interval time between perforation and intervention, the extent of injury and the experience of the surgeon. The median time of consultation in our group was 28 hours (16-156 hours). In the absence of severe inflammation and contamination primary repair had good results. In one case of retroperitoneal duodenal rupture referred more than 7 days after ERCP the extent of inflammation was so that pretended primary repair. In this patient we drained the duodenal wall with T tube.

**Conclusions:** The early diagnosis and early intervention is crucial for best outcome. The experience of the surgeon for doing sphinctroplasty is another influencing factor.

**Key Words:** Surgical management; Complication; ERCP



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## A Novel Method For Iatrogenic Vesicovaginal Fistula Treatment: Autologous Platelet-Rich-Plasma Injection And Platelet-Rich-Fibrin-Glue Interposition

Maliheh Keshvari Shirvan, Daryoush Hamidi Alamdari, Alireza Ghorifi

Department of Urology, Imam Reza Academic Hospital, Mashhad University of Medical Sciences, Mashhad, Iran  
keshvarim@mums.ac.ir

### Abstract

**Background:** Vesicovaginal fistula (VVF) has remained one of the difficult challenges to surgical therapy. In this study, autologous platelet-rich plasma (PRP) and platelet-rich fibrin glue (PRFG) has been used for VVF closure as a minimally invasive approach.

**Methods:** The data including age, parity, ICIQ- UI, ICIQ- QOL, duration of leakage, the diameter of fistula and complications were collected before and after intervention. PRP & PRFG was prepared from 12 patients' own blood. Deepithelialisation was performed around the fistula till a small amount of hemorrhage was occurred; PRP was injected around the fistula into the tissue and PRFG was interpositioned in the tract.

**Results:** No complications were observed during and after the injection. Mean age was  $39.83 \pm 8.40$  years. At 3-months' follow up, 11 patients considered themselves clinically cured; transvaginal physical examination and cystography was normal in 11 patients. ICIQ-UI and ICIQ-QOL showed remarkable improvement in 11 patients. One patient had significant improvement, but did not consent to the second injection. None of the patients had voiding dysfunction, urinary incontinence or retention or urinary tract infection.

**Conclusions:** Autologous PRP injection and PRFG interposition offers a safe, effective and novel minimally invasive approach for VVF treatment which obviates the need for open surgery. We would like to call this technique Hamidi-Shirvan method.

**Key Words:** Vesicovaginal Fistula; Platelet-Rich plasma; Transvaginal





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## Penis fracture and its treatment, 10 years experience : is retrograde urethrography necessary for management of penis fracture ?

Hassan Ahmadnia, Mahmood Molaei,  
Mohammad Mehdi Imani

*Professor of urology Mashhad University of medical sciences*

### Abstract

**Background:** Penile fracture, which is defined as rupture of the tunica albuginea of the corpus cavernosum, is not a common happening.

**Methods:** Patients history was taken at their admittance, and was followed by physical examination to detect probable urethral injury. Retrograde urethrography was performed, in all patient, before surgery. The size and site of rupture was recorded. Then the rupture of tunica was sutured with nonabsorbable sutures ( nylon 3-0 ) and the ties were placed on internal surface (continuous method). All patients were followed for 12 months.

**Results:** We here analyze our findings on 96 patients during 10 years interval. Patients age were between 16 to 62 years. The mechanism of trauma was sexual intercourse and masturbation. The most common site of injury found after exploration was right lateral. The size of rupture was ranging from 0.5cm to 3cm. 3 of the patients had marphan's syndrome. With retrograde urethrography urethral injury was detected only in 3 patients who had macroscopic hematuria and urethrorrhagia.

**Conclusion:** Therefore, there is no need to RUG unless the patients has gross hematuria or urethrorrhagia. There was no significant relationship between the length of rupture and clinical findings or complications. Our recommendation in suturing method is use of nonabsorbable sutures. The key to success in treatment of penile fracture is to achieve a rapid diagnosis based on history and physical examination, avoid unnecessary imaging tests and perform immediate surgery to reconstruct the site of injury.

**Key Words:** Penis fracture; Treatment; Retrograde urethrography





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## Trial evaluation of bone marrow derived mesenchymal stem cells (MSCs) transplantation in revival of spermatogenesis in testicular torsion

Behzad Feizzadeh Kerigh, Mohammad Ali Sabbaghi, Ahmad Reza Bahrami, Seyed Mehdi Kalantar, Maryam M. Matin, Mahmood Kalantari, Abbas Aflatoonian, Morvarid Saeinasab

*Surgery Department, Mashhad University of Medical Sciences, Mashhad, IR Iran.*

### Abstract

**Background:** To evaluation of the capacity of mesenchymal stem cells (MSCs) as multipotent adult stem cells, to revive spermatogenesis in torsion –induced azoospermia.

### Methods:

- 1- Isolation and expansion of bone marrow driven mesenchymal stem cells .
- 2- 1,1'-didodecyl-3,3,3',3'-tetramethylindocarbocyanine perchlorate (CM-Dil) labeling of BM-MSCs.
- 3- Surgical process consisting of creating torsion and detorsion and cell transplantation.
- 4- Sample preparation and histopathologic studies.
- 5- Immunohistochemistry studies with Oct-4, Vasa and c-Kit markers.

**Results:** CM-Dil labeled bone marrow derived - mesenchymal stem cells growth and maintenance in testis after 95 days post-transplantation we observed the expression of Oct4 45 days after transplantation, while Vasa and c-Kit did not show detectable expression levels during this time. After 95 days post transplantation, we could detect the expression of Oct4 and Vasa, but c-Kit expression remained undetectable. With the expression of Oct4 and Vasa during 95 days, CM-Dil labeled cells showed signs of differentiation in the base of the seminiferous tubules.

**Conclusions:** CM-Dil labeled MSCs showed initiation of differentiation by expressing Oct4, by Vasa expression, they failed to express detectable levels of c-Kit and could not regenerate mature sperms.

**Key Words:** Trial evaluation; Transplantation; Spermatogenesis; Testicular torsion



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## A comparison of systemic and catheter-directed thrombolysis for non traumatic acute lower limb ischemia

Ravari H, Sarokhani A, Pezeshkirad M, Modaghegh H

*Vascular and endovascular surgery research center, Emam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** Acute lower limb arterial occlusion occurs as a result of thrombosis or embolism. Our purpose was to assess the feasibility and efficacy of Systemic and Catheter-directed administration of Recombinant tissue plasminogen activator (rt-PA) for non traumatic acute arterial occlusion of the lower limb.

**Methods:** In this clinical trial, 38 patients (23 men, 15 women; mean age 55.5 years) treated either with systemic (18) or catheter-directed rt-PA (20) for acute lower limb ischemia. In systemic group intravenous rt-PA 0.9 mg/kg (maximum dose 90 mg); 10% of the dose is given as a bolus and the remainder infused over 2 hours period. In Catheter-directed group rt-PA 5 mg bolus, then 0.05 mg/kg/hr up to 24 hr or until maximum dose 90 mg.

**Results:** There was better changes in angiographic findings in Catheter-directed group ( $P=0.01$ ). But, There was no significant change in clinical success rate according to ankle brachial index ( $P=0.316$ ) and visual analogue scale ( $P=0.360$ ) between two groups. No significant difference in complication rate was found between the groups ( $P=0.107$ ).

**Conclusions:** Although Catheter-directed thrombolysis with rt-PA in patients with acute lower limb ischemia is more effective than intravenous rt-PA in angiographic findings, but no more effective in clinical improvement.

**Key Words:** Thrombolysis; Acute limb ischemia; Recombinant tissue plasminogen activator



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## Cardiopulmonary Protective Effects of Alprostadil and Hydrocortisone Against Distant Organ Reperfusion after Hind Limb Ischemia in Rat Model

Salimi F<sup>1</sup>, Ebrahimi A<sup>2</sup>, Melali H<sup>1</sup>, Davarpanah Jazi AH<sup>1</sup>

<sup>1</sup>Department of Vascular Surgery, Isfahan University of Medical Sciences, Isfahan, Iran;

<sup>2</sup>Department of Plastic Surgery, Trauma Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran.

### Abstract

**Background:** This study designed to investigate the possible protective effects of alprostadil and hydrocortisone as antioxidants on remote lung and myocardial injury by measuring glutathione level in an experimental rat model of hind limb ischemia-reperfusion.

**Methods:** Ischemia was induced by infra renal aortic occlusion for 1 hours in 32 male Wistar rats. Animals were divided into those receiving alprostadil (group IR/A, n=8), those receiving hydrocortisone (group IR/H, n=8), control group (group IR, n=8), and sham group (n=8). After 2 hours of reperfusion blood sample, as well as lung and myocardial tissue samples were taken. Levels of glutathione, a compound used as indirect marker of oxidative stress, were measured in tissues and blood samples. Finally all data in different groups were compared using the ANOVA test by SPSS ver 16.

**Results:** Comparison of the IR/A and IR/H versus the IR groups produced statistically significant higher concentration of lung, and blood glutathione in IR/A and IR/H groups. Treatment with alprostadil caused higher myocardial concentration of glutathione than IR rats; however myocardial glutathione levels were not significantly different between the IR/H and IR groups.

**Conclusion:** intravenous infusion of either alprostadil or hydrocortisone before reperfusion of an acutely ischemic lower limb can reduce the oxidative injury to lung and, myocardial tissue as well as circulation blood.

**Key words:** Ischemia; Reperfusion injury; Oxidative stress; Glutathione; Alprostadil; Hydrocortisone



انجمن جراحان ایران  
شاهه خراسان

## Comparison of trauma patients with or without runoff in angiographic findings

Hassan Ravari, Masoud Pezeshki Rad, Aria Bahadori, Orkide Ajami

*Vascular and Endovascular Surgery Research Center, Emam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** Arterial trauma is one of serious traumatic injury and its prognosis was related to prompt diagnosis and treatment. Also investing about angiographic findings of arterial injury and their influence on treatment strategy and prognosis is necessary.

**Methods:** Mechanism of trauma, type of injury and angiographic findings were recorded in questionnaire for each patient when they referred to angiography department and after completion of treatment and discharge, treatment type was added.

**Results:** In this study, 148 traumatic patients including 15 female with the mean age of 32(11-82 years) were evaluated. Abnormal angiographic findings were seen in 99(66.9%) patient including: cutoff with distal runoff (n=60, 60.6% of abnormalities), cut off without distal runoff (n=21, 21.2%) and spasm (n=14, 14.1%) and other findings (n=4, 4%). 51 cases were treated with open surgery and in 13 patients finally amputation of traumatic limb was done. Amputation rate was higher in patients with cutoff without runoff (33.33%) than cutoff with runoff (6.78%).

**Conclusions:** causes and types of traumatic arterial injury in our results were different with studies in other countries. Compared with final result of angiography (normal and abnormal) and arterial name, Angiographic findings are less important in prognosis and selection of patient management. Patients with spasm in angiography had better prognosis than other abnormal patients and almost always did not need to vascular surgery. The presence or absence of distal run off in primary angiography has predictive value in final amputation rate.

**Key Words:** Trauma; Vascular injury; Angiography



انجمن جراحان ایران  
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## Embolization in treatment of traumatic renal vascular lesions

Masoud Pezeshki Rad

*Assistant Professor of Radiology, Vascular and Endovascular Surgery Research Center, Imam Reza Hospital, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** Blunt or penetrating trauma may result in significant renal vascular injuries. Massive bleeding, persistent renal hemorrhage, enlarging hematoma or progressive impairment of renal functions is indications for surgical or percutaneous interventions. Our purpose was to evaluate traumatic renal vascular embolization treatments, and outcomes.

**Methods:** This study reported the technical and clinical outcomes of embolization therapy for renal vascular trauma in five patients (mean age, 35 (range 18-54) years).

**Results:** We identified five traumatic renal vascular patients with symptoms of hematuria, pain, and hematoma after blunt trauma (n=2), penetrating trauma (n=1) and percutaneous nephrolithotomy (n=2). Preliminary angiography showed pseudoaneurysms in two, arteriovenous fistula in two and active extravasation in one of patients. Coil with or without gelfoam embolization was performed and technical success with bleeding cessation was achieved in all patients. There were no procedure-related deaths or complications.

**Conclusions:** Treatment of renal vascular trauma using embolization techniques is a relatively safe with high success rates and low complications with minimal parenchymal loss.

**Key Words:** Embolization, Treatment, Renal vascular, Trauma



انجمن جراحان ایران  
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## Evaluation of clinical data and preoperative complication in aortic reconstruction in patients with aorto-iliac occlusive disease

Hossein Taheri

*Vascular And Endovascular Surgery Reserch Center, Emam Reza Hospital, faculty of Medicine, Mashhad University of  
Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** Abdominal aorta and iliac arteries are the common location for severe stenosis or complete obstruction. The purpose of this study is an assessment about demographic data, risk factors and early complications in patients who operated due to aorto-iliac occlusive disease.

**Methods:** This is a retrospective study that carried out on 70 consecutive patients who underwent aorto-iliac reconstruction between 2002 to 2010 in Imam Reza hospital. The medical records of patients were collected. Evaluation of risk factors, radiologic data, operation technique and early postoperative complications was performed. Statistical analysis was performed by SPSS software.

**Results:** The mean age was 60.2 years, with 81.4% males. The indications for surgery were claudication (64.5%), Ischemic ulcer or gangrene (21%), rest pain (14.5%) and distal micro emboli (3%). perioperative mortality was 10%. MI was the most common cause (58%) of death. the incidence of early postoperative complication rate was 21%. The major lower limb amputation rate after one month was 6.6%. graft patency after one month was 95%.

**Conclusions:** Prevalence the risk factors and also the complications during and after the operation were within the normal ranges. Application of used diagnostic tests, indication of operation and technique of the surgery is recommended.

**Key Words:** Aortic reconstruction; Complication; Aortiliac



انجمن جراحان ایران  
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## Evaluation of outcomes of femoro popliteal artery injury following trauma in Ahvaz Golestan hospital From 1390 to 1392

Iraj Nazari<sup>1</sup>, Seyed Mansour Alamshah<sup>1</sup>, Seyed Masoud Moosavi<sup>2</sup>, Mohammad  
Reza Mashhad<sup>3</sup>

<sup>1</sup> Vascular Surgeon, Ahvaz Jundishapur University, Ahvaz, Iran;

<sup>2</sup> General surgeon, Ahvaz Jundishapur University, Ahvaz, Iran;

<sup>3</sup> Trauma Flowship, Ahvaz Jundishapur University, Ahvaz, Iran.

### Abstract

**Background:** The total peripheral vascular injuries, popliteal artery injury are still a major cause of disability in the affected limb preservation societies are the most common orthopedic injuries. The aim of this study was to evaluate the impact of surgery Femoro popliteal artery injuries and defects discovered during the evaluation and treatment of patients and potential weaknesses to overcome them in order to reduce the effects of maiming.

**Methods:** In this cross-sectional study that retrospectively and prospectively to evaluate the results of surgical trauma vessels Femoro popliteal hospital Golestan Ahvaz from September 90 to June 92 was performed on 44 patients, the median duration of ischemia, the mechanism of trauma, a combination of injuries, vascular procedures, postoperative complications, and the rate of recovery after fasciotomy and amputation of the study were studied, afterward the independent T-test and Fisher's exact test were analyzed and  $P < 0.05$  was considered as significant level.

**Results:** We studied 44 patients; mean age  $27.7 \pm 12$  in which 86/4% of men and 13/6% female. 72/7% patients in various cities of this province to the dispatch center and the rest of the provincial capital of Ahvaz, respectively. Mechanism of trauma in 63/6% patients, blunt and penetrating others. The most common of compound injury is fracture and the most common repair vessels technique was, the saphenous vein graft interposition 40/9% of the victims were under fasciotomy that 72/2% complete remission invert them. The mean ischemic time (from incident to reperfusion)  $26.1 \pm 24.6$  hours.

**Conclusions:** Despite of the fact that the majority of patients (72/72%) were from the various cities that cause the long duration of ischemia the remission rates of patients after vascular surgery 88/6% and only 5 patients (11/4%) were amputation. So long duration of ischemia (from accident to reperfusion) cannot be only cause happening high incidence of amputation or vascular unreconstruction is done and the combination of multiple injuries particular a vein trauma can have an important role in amputation. In this way there were a significant differences between Amputee group and cured group ( $P = 0.008$ ).

**Key Words:** Popliteal artery injury; Prognosis; Disability



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## Vascular proximity: is it a valid indication for angiography in trauma patients?

Aria Bahadori, Masoud Pezeshki Rad, Orkide Ajami, Hassan Ravari

<sup>1</sup> Vascular and Endovascular surgery research center, Emam Reza Hospital, Faculty of medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** Certain clinical findings in extremity trauma increasing suspicion to arterial injury. Some of them like severe ischemia and active hemorrhage have very high diagnostic value and often lead to surgical intervention without need to diagnostic procedure. If peripheral pulse examination was impaired, angiography is usually indicated. In contrast, there are some controversies about prognostic value of some other indications for angiography like proximity of injury to artery with normal pulse examination.

**Methods:** All patients with extremity trauma who presented to the Imam Reza Hospital, Mashhad/Iran, with angiography indication between September 2011 and March 2013 were evaluated in a cross sectional study. The aim was to study the etiology, signs and symptoms, angiography indications and angiography results in our population.

**Results:** During the study period, 148 patients (15 female) with a mean age of 31 years (11-82 years) were evaluated. The most common cause of injury was motor vehicle accident (127 patients 85%). Angiography causes including: abnormal distal pulse examination (124, 83.8%), complex fracture or dislocation (7, 4.7%), near arterial trauma (4, 2.7%), fixed hematoma (3, 2%), nerve damage (1, 0.7%). Patient referral for angiography was indeterminate in 9 patients. 49 (33.1%) patients had normal angiography.

**Conclusions:** The most important factor in prediction of result of angiography was distal arterial pulses examination. But these data confirm the low incidence of vascular injury in asymptomatic patients with proximity. So the use of angiography when proximity is the sole indication in an asymptomatic patient with a normal vascular examination must be questioned.

**Key Words:** Angiography; Vascular injury; Trauma





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## Evaluation of the result of distal radius giant cell tumor treated by fibular autograft replacement

Reza Eshraghi<sup>1</sup>, Mohammad Gharehdaghi<sup>1</sup>, Ali Moradi<sup>2</sup>, Parham Seyf<sup>3</sup>,  
Hengameh Ebrahimi<sup>4</sup>, Nastoor Bekhradianpoor<sup>3</sup>, Amirreza Fatehi<sup>3</sup>,  
Hassan Attarchi<sup>3</sup>, Mahssa Espandar<sup>5</sup>, Meisam Fathi Vavsari<sup>3</sup>, Nima Fatehi<sup>6</sup>,  
Hanieh Zandy<sup>7</sup>, Ida Kashani<sup>7</sup>

<sup>1</sup> Associate Professor of Orthopedic Surgery, Orthopedic and trauma Research Center, Ghaem Hospital, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>2</sup> Assistant Professor of Orthopedic Surgery, Orthopedic and trauma Research Center, Mashhad University of Medical Sciences, Ghaem Hospital, Mashhad, Iran;

<sup>3</sup> Orthopedic Resident, Orthopedic and Trauma Research Center, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>4</sup> Assistant Professor of Educational Nursing, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>5</sup> Neurology Resident, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>6</sup> Intern of Medical student, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>7</sup> General Practitioner, Mashhad University of Medical Sciences, Mashhad, Iran gharehdaghi@mums.ac.ir.

### Abstract

Although giant cell tumor is considered to be a primary benign bone tumor, its aggressive behavior makes its diagnosis and treatment, difficult and challenging. This is especially true in distal radius where giant cell tumor appears to be more aggressive and difficult to control locally. We report our clinical outcome of en-block resection and reconstruction with non-vascularized fibular autograft in 15 patients with distal radius giant cell tumor. We retrospectively reviewed 15 patients with giant cell tumor (Grade 2, 3) of distal radius who were treated with enblock resection and non-vascularized fibular autograft. Five of 15 were recurrent giant cell tumor treated. Although giant cell tumor is considered to be a primary benign bone tumor, its aggressive behavior makes its diagnosis and treatment, difficult and challenging. This is especially true in distal radius where giant cell tumor appears to be more aggressive and difficult to control locally. We report our clinical outcome of en-block resection and reconstruction with non-vascularized fibular autograft in 15 patients with distal radius giant cell tumor. We retrospectively reviewed 15 patients with giant cell tumor (Grade 2, 3) of distal radius who were treated with enblock resection and non-vascularized fibular autograft. Five of 15 were recurrent giant cell tumor treated initially with extended curettage, local adjuvant therapy and filling the cavity with cement or bone graft. 11 patients were women and 4 men. Mean age of patients was 29 years (range 19-48). We followed the patients for mean 7.2 years post operation (range 4 years to 11 years). Patients were evaluated post operation with clinical examination, plain radiography of distal radius and chest X-Ray and/or CT scan. We had no lung metastasis; bony recurrence occurred in one patient (6.6%). Pain, function, and range of motion and grip strength of affected limb were evaluated and mayo wrist score was assessed. 53.3% patients had excellent or good functional wrist score. 80% patients were free of pain or had only occasional pain. 80% of patients returned to work. Mean range of motion of the wrist was 77 degrees of flexion- extension and mean grip strength was 70% of the normal hand. En-block resection of distal radius giant cell tumor and reconstruction with non-vascularized fibular autograft is an acceptable method of treatment in local control of the tumor and preserving function of the limb.

**Key Words:** Distal radius; Giant cell tumor; Fibular autograft replacement



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## Pain and muscle spasm can mask pure ligamentous cervical spine injury in victims of earthquake

Masoudi MS, Tavakoli M, Tavakoli Z

Aja University of Medical Sciences, Trauma Research Center, Iran.

### Abstract

**Background:** Due to mechanism of injury, most common site of vertebral injury in victims of earthquake is lumbar area and the pure ligamentous cervical lesions are in rarest number. May be these cervical pure ligamentous injuries cannot be detected in routine study by 3view plane graphy examination .we reviewed patient with vertebral column and spinal cord injuries in Azarbaijan twin earthquakes retrospectively.

**Methods:** We review exact data from 961 patient of Azarbayjan earthquake in 2012 that was reported by Kamyar Ghabili et al. and also tested 6 non hospitalized new patients that came to military hospital 2 day after disaster. New patients came to emergency ward with complain of neck pain .In all 6 patients 3-view plan graphy (AP-LAT-odontoidview) were taken. All of them rechecked after one week by same way. Due to inadequate data, dynamic cervical x-ray (F/E) was taken at 2 time (day of first visit and after one week).

**Results:** Azarbaijan twin earthquakes has about 300 dead and more than 2000 injured victims. From 923 alive admitted patients, 26(2.8%) had spinal injury (50% inlumbar, 21% thoracic, 15.7% cervical and 13.5% in sacral area. All of patients with cervical spine injury had normal neurologic examination. But from 6 new admitted patients all of them had normal 3vp graghy on arrival. All of them had none displaced spine in dynamic view at first step. After one week, they had normal 3vp study again but 2 of them had abnormal dynamic study (one with c3/c4 and another with c6/c7 subluxaion).

**Conclusions:** Dynamic x-ray study in patient with blunt cervical injury can be negative specially in victims of earthquake because of popularity of pain and muscle spasm. So delayed (after one week) dynamic cervical study in patient with neck pain should be taken.

**Key Words:** Muscle Spasm; Cervical Spine Injury.



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شاهه خراسان

## Diet adherence after coronary artery bypass surgery

Rouhi L, Paryad E, KazemnezhadLeili E, Booraki SH

<sup>1</sup> MSc nursing student, Guilan University of Medical Sciences, Guilan, Iran;

### Abstract

**Background:** CAD is a common type of heart disease and in recent decade it is most important cause of dying in all of the world and in Iran .CABG is the common invasive therapeutic style of this problem. Some of CAD patients think after CABG their problem is solve forever, though this procedure has conservative effect and also reduce the signs and symptoms of this illness but would not stop the illness.

**Methods:** This cross-sectional study was done in area of heart center in Rasht and the samples were chosen from patients who passed 6 months after their CABG .217 patients were entered in this study after saying their consent. The questionnaire of study had two section .The first section was about demographic data and other section had phrases about diet adherence .Reliability of questionnaire was detected by test and retest ( $r=92/76$ ).We called with sample by telephone and after achieving their verbal consent, all of question read for them.

**Results:** The finding showed the majority of samples were male (61/3%), married (83/4%) and their mean age was ( $58/70 \pm 9/46$ ).The education level of majority of samples was high school diploma (44/2%) and in majority of samples (88/5%) diet adherence was undesirable .Other finding showed significant relationship between diet adherence and sex by chi 2( $p=0/041$ ).

**Conclusions:** Diet adherence is an important key to improve health status of patients after CABG. By the way, we have to design suitable strategies to increase patient adherence in diet domain. It seems to design new educational strategies would be useful for these patients.

**Key Words:** Adherence; Diet; Coronary artery bypass graft surgery



انجمن جراحان ایران  
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## Effect of the usage of Aloe vera gel in the treatment of surgical incisions in diabetic rats

Malieh Alipour Tabrizi, Hamidreza Ghafari, Nayereh Nezhad hosseini, Roghayeh Alavi

### Abstract

**Background:** Aloe vera is a cactus-like perennial succulent belonging to the Liliaceae Family that is commonly grown in tropical climates. Animal studies have suggested that Aloe vera may help accelerate the wound healing process. Therapeutic effects of various treatment options in wound healing have been one of the most controversial issues in surgical science. The present study was carried out to examine the effects of Aloe vera gel on sutured incisions in diabetic male rats.

**Methods:** A total of 40 male Male Sprague-Dawley rats Weighing 250-300 g were equally divided into 4 groups as follows: control, untreated incision-wound rats, those treated with once-daily application of normal saline (NSS) and those treated with once-daily application of topical Aloe vera gel. The groups by an intraperitoneal injection of streptozotocin diabetic 50 mg / kg were diabetic. In the rat skin incision length of 5 cm and a width of 0.5 cm was down then sutured. The animals in each group were equally subdivided into 2 subgroups for Histological changes and the study of cutaneous microcirculation and wound healing on day 7 and 14 after incision. Dorsal skin fold chamber preparation were performed to examine dermal microvascular changes, including arteriolar diameter, postcapillary venular permeability.

**Results:** The results indicated differences in wound healing between the various treatments when compared to the control group. Accelerated wound healing was observed in the group treated with Aloe vera compared to control. Animals treated with Aloe vera presented an earlier onset of the proliferative phase compared to the untreated incision-wound rats and animals treated with NSS. Morphometric data confirmed the structural findings. Besides, the healing area of the Aloe vera-treated wound was better than that of the untreated and NSS- treated groups during 7 and 14 days after sutured incisions.

**Conclusions:** Aloe vera could exhibit the actions of both anti-inflammation and wound healing promotion when applied on on sutured incisions in diabetic male rats.

**Key Words:** Aloe vera; Surgical incision; Diabet; Sprague-Dawley rats; Wound healing



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## Prooxidants-antioxidants balance in patients with traumatic brain injury

Mohamadreza Ehsai, Mehdi Khajavi, Mohammad Hassan Arjmand, Daryoush Hamidi Alamdari

*Stem Cell and Regenerative Medicine Research Group, Department of Biochemistry, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** One of main mechanisms in post-traumatic secondary brain damage is related to oxidative stress (OS). OS is the consequence of an imbalance between prooxidants and antioxidants towards prooxidants. The prooxidants cause lipid peroxidation of cell membranes, protein, DNA oxidation and changes in brain cells growth. The first event in neural tissues when trauma happen is producing the free radicals and lipids peroxidation, which lead to hypo- perfusion, edema, disruption of axonal guidance, metabolism disorder and wallerian degeneration (25). In this study, we determined the prooxidant-antioxidant balance (PAB) in patients with brain injury by PAB assay; and its correlation with coma scales: GCS (Glasgow coma scale), GOS (Glasgow outcome scale).

**Methods:** Sera of 98 patients with traumatic brain and 100 healthy subjects were collected. The PAB was measured. Age, sex, GCS (Glasgow coma scale), GOS (Glasgow outcome scale), mechanism of injury, brain lesions found on CT scan and lesions in other parts of the body caused by trauma were determined.

**Results:** A significant increase of the PAB value was observed in patients ( $152.8 \pm 15.9$  HK unit) in comparison to control group ( $63.66 \pm 12.6$  HK). A significant positive correlation was established between the PAB value and GCS, GOS, brain lesions, mechanism of injury, and lesions in other traumatic parts. There was no significant correlation between PAB and age and sex of patients.

**Conclusions:** The PAB assay can show the oxidative stress in traumatic brain injury. In further research, this easy elucidation of oxidative stress in these patients can be applied to develop the effective antioxidant therapies for devising strategies to lessen or delay the progression and/or the complications

**Key Words:** Brain injury; Antioxidant; Prooxidant; Trauma



انجمن جراحان ایران  
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## Dressing of the donor site of partial thickness skin grafts with Vaseline gauze and fine mesh gauze Arash Beiraghi-Toosi

*Assistant Professor of Plastic Surgery, Surgical Oncology Research Center, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** The donor site of split-thickness skin graft is annoying for patients and its repair time is long. Varied dressings are studied for the donor site. Some are expensive and not easily available. Fine gauze and vaseline gauze are not expensive and are easily available. In this study, we compare these dressings.

**Methods:** Thirty candidates of partial-thickness skin grafts from thigh are studied. Every patient was compared with itself: half of the donor site was dressed with fine gauze and half with vaseline gauze. Pain was assessed with verbal pain scale from 0 to 10. Healing time was assessed as the time to complete epithelization and detachment of dressing without trauma. Infection was diagnosed clinically by a plastic surgeon based on symptoms such as redor or purulent discharge.

**Results:** The mean healing time with vaseline gauze was less than fine gauze. The mean score of pain with fine gauze was less than vaseline gauze. There was only one case of infection in fine gauze dressing.

**Conclusions:** Faster healing with vaseline gauze is reported in other studies; but the finding of less pain with fin gauze is contradictory with other studies. Our study was more accurate because two dressing types were compared in every individual; but it may be less accurate regarding differentiation of pain score due to proximity of two areas.

**Key Words:** Skin graft; Donor; Dressing



انجمن جراحان ایران  
شأنه غرارات

## Novel ideas for Endoscopic approach to maxillofacial trauma

Mohammad Reza Shafii

*Assistant Professor of Plastic and Reconstructive Surgery, Plastic, Reconstructive and Craniomaxillofacial Unit, Taleghani Hospital, Kermanshah University of Medical Science, Kermanshah, Iran.*

### Abstract

**Background:** Endoscopic approaches to maxillofacial trauma provide exciting new options for the management of facial fractures. This article reviews the current literature including new techniques, indications, and outcomes in endoscopic management of facial fractures and presents my experiences in these approaches..

**Methods:** The transoral treatment of condylar neck and subcondylar fractures was performed in 60 patients from May 2010 to October 2013. Six months after surgery TMJ function was evaluated. Good TMJ function was noted 6 months after surgery. Mouth opening was measured to be more than 40 mm without deviation. Postoperative range of motion with a satisfying lateral excursion was found. I performed endoscopic fracture repair in ten patients with frontal sinus fracture and six patients with zygomatic arch fracture and six patients with orbital bone fracture. Good functional and cosmetic results obtained after these operations.

**Results:** The current literature suggests that, when compared with an open approach, smaller endoscopic incisions result in reduced patient morbidity with similar outcomes.

**Conclusions:** Endoscopic repair of facial fractures is a new and evolving technique that offers the potential for reduced patient morbidity and operating time, as well as quicker patient recovery.

**Key Words:** Endoscopic approach; Maxillofacial trauma; Facial fractures



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## The combined Surgical treatment of High-Grade Gynecomastia (grad IIb-III simons)

Ezzatolla Rezaei, Arash Beiraghi Toos

*Assistant Professor of Plastic Surgery, Endoscopic & Minimally Invasive Surgery Research Center, Ghaem Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.*

### Abstract

**Background:** Gynecomastia is the proliferation of the glandular tissue of the male breast with a prevalence of 40 to 56 percent of men. Its etiology is varied. In this study, we present a combined surgical method using liposuction, resection of the remaining tissue (pull trough), and circumareolar skin excision and present the results.

**Methods:** This is a prospective study performed from 1388 to 1391 on 15 male patients (30 breasts) with gynecomastia. Patient data including grade, technique, and operations are evaluated.

**Results:** The mean age was 22 years, (min=16, max=35). Resection of the remaining tissue was required in 8 patients. The mean amount of resection was 20 gr. Of these, 6 patients were grade IIb and 2 grade III Simons. In 7 cases, no glandular tissue was palpated following liposuction and no incision was required for excision of tissue. Of these, 4 patients were grade IIb and 3 grade III Simons.

**Conclusions:** We recommend liposuction with or without excision of remaining tissue for grade I and II Simons gynecomastia and the combined liposuction, pull through, and periareolar skin excision technique for grade III cases..

**Key Words:** Surgical treatment; Gynecomastia





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## Management of Laryngotracheal and Tracheobronchial Injuries

Hamid Reza Davari

*Department of Surgery, Nemazee Hospital, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.*

### Abstract

Laryngotracheal and tracheobronchial injuries are uncommon, and their successful diagnosis and management often require a high level of expertise. This paper aimed at retrospective analysis of a thoracic surgeon's experience in the diagnosis and management of traumatic injuries to the larynx, trachea and major bronchi. Forty one patients with major airway trauma were managed from March 1994 to November 2008.

Their demographic characteristics including age, gender, mechanisms and locations of injuries, associated other organ injuries as well as surgical airway managements and the outcomes were recorded. Seven patients had re-implantation of the main bronchus, and one patient had a repair of the right upper lobe bronchus with concomitant bilobectomy. In cases of tracheal injury, 16 patients had a primary repair of trachea. However, seven patients with tracheal injury first conservative approaches, but 4 of them were later subjected to sleeve resection of trachea. In patients with laryngotracheal injuries, and in a patient with thermal injury, Montgomery T-Tube was used with or without repair and/or reconstruction. Four patients died, but no significant morbidity was seen in others. The analysis of the cases suggests that laryngotracheal and tracheobronchial injuries require early correct diagnosis, skillful management, and prompt individualized surgical airway repair.

**Key Words:** Trauma; Larynx; Trachea bronchi; Intubation



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## Management of tracheobronchial injury: case presentation and review of the literature

Hamid Reza Davari, Seyed Ali Malekhossini

*Department of Surgery, Nemazee Hospital, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.*

### Abstract

Tracheobronchial injuries are uncommon and their successful diagnosis and treatment often requires high level of suspicious. Surgical repairs should be individualized for each type of injury. This article reviews diagnosis and management of traumatic injuries to the trachea and major bronchi. From March 26, 1991 to March 20, 2003, twenty-seven patients with major airway trauma were managed in Nemazee hospital, Shiraz, Iran. Afterwards these patients were prospectively studied, for a period of 10 years. The mechanism of injury was blunt trauma in 13 patients, stab wound in 6, gunshot in 2 patients, and iatrogenic in 6. Two patients had associated esophageal injury. Twenty-one patients were male and 6 were female. Eight patients had major bronchial injury, 13 had cervical tracheal injury and 6 had mediastinal tracheal injury. Six patients had re-implantation of main bronchus (5 right and 1 left), and two patients had repair of bronchus with concomitant bi-lobectomy in one of them. In cases of tracheal injury, 12 patients had primary repair of trachea with distal tracheostomy in two. However, 7 patients were managed conservatively with later sleeve resection of trachea and laryngotracheal anastomosis in three patients. There was no morbidity but three patients died. Tracheobronchial injury is extremely challenging due to its early threat to life. A high level of suspicious and the liberal use of bronchoscope are critical in the diagnosis of tracheobronchial injuries. Avoidance of iatrogenic complications, primary repair and liberal use of autogenous tissue for wrapping or buttressing increases successful rate.

**Key Words:** Trauma; Tracheobronchial injury; Reimplantation



انجمن جراحان ایران  
شأنه غرسان

## Surgical Treatment of Pulmonary Hydatid Cysts: Does the location of cyst affect on the choice of surgical technique?

Ali Sadrizadeh<sup>1</sup>, Seyd Ziallah Haghi<sup>2</sup>, Reza Bagheri<sup>3</sup>,  
Seyd Hossein Fattahi Masoum<sup>4</sup>, Marziyeh Noori Deloei<sup>5</sup>

<sup>1</sup> Associate Professor of Thoracic Surgery, Cardiothoracic Surgery and Transplant Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>2</sup> Professor of Thoracic Surgery, Cardiothoracic Surgery and Transplant Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>3</sup> Associate Professor of Thoracic Surgery, Cardiothoracic Surgery and Transplant Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>4</sup> Professor of Thoracic Surgery, Cardiothoracic Surgery and Transplant Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran;

<sup>5</sup> Thoracic Surgeon, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** Hydatid cyst is the most common lung parasitic disease. Hydatid disease is endemic in Iran and the highest rate is reported in Khorasan Province. Hydatid cyst is more commonly situated in the right lung and in the lower lobes. The aim of this study was to evaluate surgical treatment of pulmonary hydatid cysts and whether or not the location of cyst affects on the choice of surgical technique.

**Methods:** This study was performed on 87 patients diagnosed as pulmonary hydatid cyst who were referred to Ghaem Hospital from 2010 to 2012. The choice of surgical technique was performed according to the size, localization, and the number of cysts. The patients were divided into two groups: 1) surgery with preserving lung parenchyma at involved lobe, 2) lobectomy. Then, the relation between location of cyst and the choice of surgical technique was evaluated. Data was analyzed by Chi-square and Fisher exact tests.

**Results:** In this study, the most affected age group was (21-30yrs) with mean age of 30 yrs and the rate of pulmonary hydatid cyst was 52.9% in male and 48.1% in female. No significant relation was found between the size of cyst and need to lobectomy ( $P=0.682$ ). Moreover, no significant relation was observed between the number of cysts and performing lobectomy technique ( $P=0.344$ ). But, there was significant relation between the existence of cyst in middle lobe and need to perform lobectomy ( $P=0.016$ ).

**Conclusions:** According to the results, the choice of treatment does not depend on the size and the number of cysts, but it may be related to the location of the cyst.

**Key Words:** Pulmonary hydatid cysts; Surgical treatment; Location of cyst



انجمن جراحان ایران  
شاهه خراسان

## Penetrating cardiac trauma

Kambiz Alizadeh

*Assistant Professor of Cardiac Surgery, Qhaem Medical Hospital, Mashhad University of Medical Sciences (MUMS),  
Mashhad, Iran.*

### Abstract

**Background:** Near 113 years ago, the first report of a successful heart repair after cardiac penetrating trauma was published by Hill in Alabama, USA. The right ventricle alone is involved in 35% of patients reaching a hospital after their traumatic episode. The left ventricle alone is involved in 25% of cases. In 30% more than one chamber is involved.

**Methods:** Patients with stab wounds of the heart and great vessels usually survive when treatment is adequate. It is very important in our strategy if an equipped operating room is available in emergency ward or not. If so, emergency thoracotomy shall be done and if not a large bore needle (13F) is inserted into the pericardial space through the sub-xiphoided rout and the patient is transferred to operating room as soon as possible.

**Results:** Ventricular wounds are best sutured with interrupted pledgeted mattress sutures with 2-0 or 3-0 polyester or polypropylene with inflow occlusive technique. We could repair empty ventricle simply within couple of minutes. Wounds near a major coronary artery are similarly sutured with pledget on both sides of artery and sutures passing beneath it. If the left anterior descending artery has been damaged, a coronary artery bypass graft should be performed.

**Conclusions:** Prompt and effective therapy allows good results in most patients with stab wound of hearts. Overall speaking about 80% of patients survives. Results for missile wounds are less satisfactory and depend on extensiveness of the wound, general condition of the patient and associated injuries (overall survival rate about 40%). The functional result in surviving patients is usually excellent.

**Key Words:** heart; trauma

# Posters



انجمن جراحان ایران  
شاهه فراسات

## Assessment of sublingual nitroglycerin for management of retained placenta in Azad university hospitals mashhad branch

Nosshin babapoor, Hamed Beyzaii, Mojtaba Meshkat

### Abstract

**Background:** Retained placenta is usually defined as placenta withdrawal failure tile 30 minutes after delivery, which is one of the most significant complications of the third stage of labor and can cause maternal morbidity and mortality due to huge postpartum hemorrhage or infection. There are various treatments for improving these outcomes, including placenta currage using hands in the operating room associated with anesthesia risks and complications and use of oxytocin via umbilical vein for which a catheter is required. Another way to solve the problems is the use of intravenous nitroglycerin that is associated with high decrease of blood pressure. In this study, we want to investigate the effect of sublingual nitroglycerin therapy in the treatment of retained placenta which unlike the intravenous method is not associated with sharp drop in blood pressure. On the other hand, it seems to release the trapped placenta with the uterine muscle relaxant mechanism and could be cost effective in prevention of remaining placenta complications risks.

**Methods:** In this double-blind clinical trial, after explaining the procedure for the patients and obtaining their consent accompanied by the medical ethics committee approval, 60 patients in Islamic Azad University hospitals of Mashhad with retained placenta were randomly divided into two groups using randomized numbers table. Both groups received an appropriate dose of oxytocin. During the third stage of labor control, one group received 2 sublingual tablets of 0/4mg nitroglycerin (total 0/8 mg) and the other one just received placebo. After 5 min of drug therapy the placenta was investigated with traction on the umbilical cord. Patients' blood pressure and pulse rate before and 5 and 15 min after the administration of nitroglycerin and the amount of bleeding during this period got studied. Each patient of any group would be taken to the operation room in any case of danger and the placenta will be removed under general anesthesia. These data analyzed by SPSS v.18 and Statistica v.8 software programs.

**Results:** Despite there is no significant difference between the groups regarding to the maternal age, gestational age or parity, but in general, both groups had meaningful changes in systolic blood pressure, diastolic blood pressure and heart rate over the time (P-Value <0.05), as well as significant differences between the groups about the time of the placenta getting out and bleeding which is observed (P<0.05). This means that use of nitroglycerin shortens the time of placental removal and reduces bleeding compared to the control group.

**Conclusions:** These findings reinforce the idea that use of sublingual nitroglycerin is effective in the treatment of retained placenta

**Key Words:** Sub lingual nitroglycerin; Retained placenta; Oxytocin



انجمن جراحان ایران  
شانه فراسات

## Bronchial injury after motor vehicle accident in a 14 year old boy

Reza Afghani<sup>1</sup>, Ali Sadrizadeh<sup>2</sup>, Ehsan Soltani<sup>3</sup>

<sup>1</sup>MD, Resident of Thoracic Surgery, Mashhad University of Medical Sciences

<sup>2</sup>MD, Associate Professor of Thoracic Surgery, Cardiothoracic Surgery and Transplant Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>3</sup>Assistant Professor, Acute Care Surgery Research Center, Taleghani Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** Bronchial injury may occur due to blunt chest trauma, although this is a rare case, but, its a serious complication and life threatening event.

**Case presentation:** A 14 year old boy was admitted to the hospital after motor vehicle accident. He had blunt chest trauma without concomitant injury. Due to respiratory symptoms and subcutaneous emphysema, bilateral chest tube inserted. Despite chest tube insertion and low suction, left lung did not expand. Fiberoptic bronchoscopy requested and accomplished to the patient. With the diagnosis of left main bronchus transaction, the patient underwent a left thoracotomy with resection of the stricture and end to end anastomosis of left main bronchus.

**Conclusions:** Due to rarity of bronchial injury, its accurate diagnosis needs high index of suspicion. Exact physical examination, signs and symptoms, ask about mechanism of trauma, proper radiologic and endoscopic evaluation can help in early diagnosis. Delay in diagnosis and treatment leads to increased risk of mortality and morbidity after these injuries.

**Key Words:** Bronchial injury; Blunt chest trauma; Fiberoptic bronchoscopy



انجمن جراحان ایران  
شاهه خراسان

## Comparison of sufentanil and midazolam for reduction of myoclonic movements following etomidate injection

Alipour M, Tabari M

### Abstract

**Background:** Etomidate is one of the intravenous anesthetics with very few pulmonary side effects and cardiovascular stability. pain on injection and myoclonus are two of its side effects and myoclonus of etomidate might be a problem in some patients that makes it necessary to find a solution for reduction of myoclonus.

**Methods:** In this prospective double blind clinical trial, after informed consent, 50 patients with ASA II and III scheduled for general anesthesia for elective eye surgery in the Khatamolanbia hospital of Mashad University of Medical Sciences were randomly assigned to receive  $2\mu\text{g}/\text{kg}$  sufentanil or  $0.015\text{mg}/\text{kg}$  midazolam 90 seconds before the induction with etomidate ( $0.3\text{mg}/\text{kg}$ ). The patients were observed for any myoclonic movement.

**Results:** The two groups did not differ in mean age (pvalue 1) but gender was different ( $p=0.047$ ). The frequency of myoclonus in sufentanil and midazolam group was 28% and 84% respectively. In sufentanil and midazolam group myoclonus intensity of one, was 8 and zero percent, intensity of two was 20 and 32 percent and intensity of three was zero and 52 percent respectively, so myoclonus in midazolam group was strongly More than sufentanil group (Pvalue=0/0001).

Myoclonus duration in sufentanil group was  $5.8 \pm 13.2$  second and in midazolam group  $69 \pm 47.8$  second which is statistically different (Pvalue=0) so myoclonus duration in midazolam group was strongly longer than sufentanil group.

**Conclusions:** The frequency and intensity and duration of myoclonus in midazolam group was strongly more than sufentanil group.

**Key Words:** Eomidate; Myoclonus; Sufentanil; Midazolam





انجمن جراحان ایران  
شاهه فراسات

## Comparison of the effects of paracetamol, ondansetron, granisetron, magnesium sulfate and lidocaine drugs in reducing propofol injection pain

Mohammad Alipour, Masoumeh Tabari

Department of Anesthesiology, Mashhad University of Medical Sciences, Mashhad, Iran

### Abstract

**Background:** Propofol is most widely used as an intravenous anesthetic. One of its most common complications is the pain upon injection; therefore, variant methods, with different effects, have been proposed in order to alleviate the pain.

This study investigates the effects of paracetamol, ondansetron, granisetron, magnesium sulfate and lidocaine drugs in reducing the pain of propofol injection during anesthetic induction. Also, the hemodynamic changes will be analysed.

**Methods:** 336 patients undergoing elective orthopedic surgeries were divided into six groups. A 20-gauge needle was embedded in a venous vessel on the back of the hand and 100 cc of Ringer serum was injected into the vein. Also, a tourniquet proximal was applied to the injection site. Afterwards, paracetamol 2mg/kg (group p), magnesium sulfate 2mmol (Group M), ondansetron 4mg (Group O), granisetron 2mg (Group G), lidocaine 40mg (Group L) and saline 5cc (Group S) were injected in the embedded vessel, and after 60 seconds, the tourniquet was opened.  $\frac{1}{4}$  of the total dose of propofol (mg/kg5/2) was rapidly injected (4mg/sec) and then the injection pain was evaluated. Finally, the fentanyl (2mic/kg), atracurium 5/0mg / kg, and the remaining dose of propofol were injected and the vital signs were recorded before the administration of propofol and 1.3 and 5.10 minutes after the injection.

**Results:** The six groups did not differ significantly, regarding their sex, weight or age. Propofol injection pain was less in L and G groups, in comparison with the others ( $p=0.00001$ ). By analyzing the hemodynamic changes, it was observed that the least amount of change in mean arterial pressure, was in the paracetamol group.

**Conclusions:** The reduction of propofol injection pain was observed by using medications (in comparison with normal saline), but it was more significant in groups G and L. Moreover, Hypotension was higher in groups S and G and lower in group P.

**Key Words:** Paracetamol; Magnesium sulfate; Ondansetron; Granisetron; Lidocaine; Propofol injection pain



انجمن جراحان ایران  
شأنه غراسات

## Comparison of sufentanil and midazolam for reduction of myoclonic movements following etomidate injection

Mohammad Alipour, Masoumeh Tabari

Department of Anesthesiology, Mashhad University of Medical Sciences, Mashhad, Iran

### Abstract

**Background:** Etomidate is one of the intravenous anesthetics with very few pulmonary side effects and cardiovascular stability. Pain on injection and myoclonus are two of its side effects and myoclonus of etomidate might be a problem in some patients that makes it necessary to find a solution for reduction of myoclonus.

**Methods:** In this prospective double blind clinical trial, after informed consent, 50 patients with ASA II and III scheduled for general anesthesia for elective eye surgery in the Khatamolanbia hospital of Mashhad University of Medical Sciences were randomly assigned to receive 2 µg/kg sufentanil or 0/015mg/kg midazolam 90 seconds before the induction with etomidate (0/3mg/kg). The patients were observed for any myoclonic movement.

**Results:** The two groups did not differ in mean age (pvalue 1) but gender was different (p=0/047). The frequency of myoclonus in sufentanil and midazolam group was 28% and 84% respectively. In sufentanil and midazolam group myoclonus intensity of one, was 8 and zero percent, intensity of two was 20 and 32 percent and intensity of three was zero and 52 percent respectively, so myoclonus in midazolam group was strongly more than sufentanil group. (Pvalue=0/0001)

Myoclonus duration in sufentanil group was 5/8±13/2 second and in midazolam group 69±47/8 second which is statistically different (Pvalue=0) so myoclonus duration in midazolam group was strongly longer than sufentanil group.

**Conclusions:** The frequency and intensity and duration of myoclonus in midazolam group was strongly more than sufentanil group.

**Key Words:** Etomidate; Myoclonus; Sufentanil; Midazolam



انجمن جراحان ایران  
شأنه غرسان

## Effect of oral Tizanidine on duration of block and hemodynamic changes during lower limb orthopedic surgery with spinal anesthesia

Alipour M, Tabari M

### Abstract

**Background:** different drugs are used as premedication before spinal anesthesia to increase the time of sensory block and reduce the hemodynamic changes. To reduce the effects of the sympathetic nervous system blocks especially in older and disposed myocardial ischemia patients. Alpha-2 agonists such as clonidine and tizanidine are recommended for this purpose.

Tizanidine has similar effects of clonidine but with fewer side effects.

**Methods:** 70 patients undergoing lower limb orthopedic surgery under spinal anesthesia were divided into two groups, 90 min before spinal anesthesia was administered orally 4 mg tizanidine in the tizanidine group and placebo in the control group.

BP and HR of patients before and after spinal anesthesia (min 5, 10, 15, 30, 60, 90) were measured and recorded.

In all patients after T6 sensory block level achieved, surgery was started. And the arrival time of the block from T6 to T10 (4 dermatome regression) were recorded.

**Results:** During the study, the mean blood pressure was reduced in both groups compared with baseline. The decrease in the control group throughout the study compared to baseline was statistically significant difference, but in tizanidine group changes in mean blood pressure during the study period was not statistically significant difference.

The average mean blood pressure changes during the study between the two groups is not statistically significant difference.

The mean changes in diastolic blood pressure throughout the study was statistically significant difference compared to baseline in the control group, but in tizanidine group diastolic blood pressure changes during the study period was not statistically significant difference.

Mean systolic blood pressure decreased in both groups during the study compared to baseline. The reduction in the control group throughout the study compared to baseline was statistically significant difference. But it is not a statistically significant difference in the tizanidine group.

Spinal sensory block onset time and regression time of sensory block in 4 dermatomes after spinal anesthesia in the study groups were similar.

**Conclusions:** tizanidine is effective in reducing the hemodynamic changes of spinal anesthesia.

**Key Words:** hemodynamic; spinal anesthesia; tizanidine



انجمن جراحان ایران  
شانه فراسات

## Esophagus Perforation Secondary Due To Insertion of Nasogastric: Case Report

Mehdi Fathi, Marjan Joudi

*Assistant professor of pediatric surgery, Faculty of Medicine, Mashhad University of Medical Science, Mashhad, Iran.*

### Abstract

**Background:** A Nasogastric tube (NG) insertion is usual technique in any neonatal intensive care unit. In some times insertion of Nasogastric tube in infants with esophagus friable anatomy tissues, may have some dangerous side effect, but happen of problems incidence due to this procedure are not commonly seen. Esophageal perforation is a rare but known complication of these procedures.

**Methods:** Infant which was in the first day of his life, with weight around 2800gr and first child of parent without any patient history in mother and fetus in 39th week of pregnancy which with an elective surgery. First try for putting Nasogastric tube has done in NICU ward, the tube which enters in esophagus at around 5 cm of esophagus hit to hurdle.

**Results:** Following of this order, simple radiography of thorax has done. Nasogastric tube observed in the first intra ribbed and atresia of esophagus suggested.

**Conclusions:** Conservative management in an otherwise uncomplicated case can result in complete recovery in most affected neonates. These cases highlight the fact that esophageal perforation can happen due to procedures as putting NG tube.

**Key Words:** Nasogastric tube; perforation; Insertion



انجمن جراحان ایران  
شانه فراسات

## Evaluating the effect of selective estrogen receptor modulators on serum lipids in early postmenopausal breast cancer patients

Ali Abdolahi

*Surgical Oncology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran*

### Abstract

**Background:** Treatment of breast cancer as the most common cancer in women is one the important concerns these days. Selective estrogen receptor modulators are used in the in the treatment of breast cancer patients. The study was conducted to evaluate the effect of Toremifene and Tamoxifen on serum lipids in early postmenopausal breast cancer patients.

**Methods:** This was a blind randomized clinical trial study which was performed on 84 menopause women with early breast cancer. Patients were included in 2009-2012 from Laleh and Javaheri hospitals in Tehran. Patients were randomly divided in Tamoxifen (41 patients) and Toremifene (43 patients) groups. All patients were followed for 12 months. This study was approved by research committee of Islamic Azad University, Tehran medical Branch.

**Results:** Mean age in Tamoxifen group was  $58.48 \pm 6.56$  years and mean age in Toremifene group was  $56.18 \pm 5.86$  years ( $P=0.628$ ). Both medications had reduced serum total cholesterol and serum LDL but there was no significant difference between groups ( $P>0.05$ ). Toremifene increased the HDL in 23% and tamoxifen decreased it by 3% ( $P=0.001$ ).

**Conclusions:** Our evidence showed that according to Toremifene properties this drug could be used as an alternative option instead of tamoxifen in breast cancer patients. But according to our small sample size and short term follow up it seems that more randomized clinical trials are needed to confirm the results of this study and evaluate survival in these patients.

**Key Words:** Breast cancer; Toremifene; Tamoxifen



انجمن جراحان ایران  
شانه فراسات

## Evaluation of apoptosis proteins Bax and Bcl<sub>2</sub> in human seminoma and correlation with clinicopathologic aspect

Behzad Feizzadeh Kerigh<sup>1</sup>, Noriyeh Sharifi<sup>2</sup>, Seyed Hossein Mohagheghi<sup>3</sup>

<sup>1</sup>Associate Professor of Urology.

<sup>2</sup>M.D, Associate Professor of Pathology

<sup>3</sup>M.D, Urologist

### Abstract

**Background:** We evaluated Bax and Bcl-2 expression in classic seminoma and their correlation with response to radio/chemotherapy and patient's prognosis.

**Methods:** Twenty-five patient with classical seminoma during 1995-2005 enrolled into the study. Paraffin- embedded formalin fixed tissue blocks of the primary tumor were available for 25 case from pathological archive.

Paraffin sections with 4μm diameter were mounted on adhesive slide, deparaffinized and rehydrated and exposed to Bcl-2 and Bax antibodies for immunohistochemical study. Expression of Bax and Bcl-2 were determined by the percent of positive cells and correlated with response to adjuvant radio/chemotherapy and patient's prognosis.

**Results:** Of 25 cases, two were excluded from the study, one case due to necrosis of paraffin-embedded tissue and the other due to archive file loss. Mean patients age was 38±11.7 years (range 22-64 years). Left testis was the primary tumor site in 13 (56.5%) cases and right testis in 10(43.5%) cases (P=0.532). UDT was reported in 3 cases (13%).

The mean duration between symptoms and tumor diagnosis was 11.48 month (Rang 1-48mo).

Retroperitoneal lymphnode involvement in 13 case was N0(56.5%), 2 case N2 ( 8.7%) and 8 case N3 (34.8%) and respectively stage I, stage IIb and stage IIc(P=0.019). After radical orchiectomy, thirteen case (56.5%) had adjuvant radiotherapy and ten case (43.5%) had adjuvant chemotherapy. All patients were followed up between 12 and 102 months after adjuvant radio-chemotherapy. Under immuno-histochemical stain, Bcl2 could not be detected in 22(95.7%) case and was expressed in 50% of tumor cells just in one cases (4.3%).

Bax was expressed in the tumor cell cytoplasm of 23 case. In 22 cases (95.7%)≥50% of tumor cells were positive for antibody and in one case 40% of tumor cells. Mean Bax expression level was 88.26%±17.36 % (Rang 40%-100%) (P=0.002). The intensity of antibody reaction ranged from weak to severe scored in five score. Primary tumor necrosis was classified as negative – focal necrosis and massive necrosis.

**Conclusions:** According to our results, Bax indices are positively and Bcl-2 indices negatively associated with response to radio/chemotherapy and good prognosis in classic seminoma. Intensity score and primary necrosis are not correlated with thr response to adjuvant therapy and prognosis, because all patients respond properly to our treatment.

**Key Words:** Bcl-2; Bax; Apoptosis; Classic seminoma



انجمن جراحان ایران  
شاهه خراسان

## Management of stapler line fistula after sleeve gastrectomy with fibrin glue- case report

Ali Jangjoo<sup>1</sup>, Daryoush Hamidi alamdari<sup>2</sup>

<sup>1</sup> Associate professor of minimally invasive surgery, surgical oncology research center, Mashhad University of medical sciences

<sup>2</sup> Stem cell and Regenerative Medicine Research Group, Department of Biochemistry, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Introduction:** Management of GI fistula is a challenge for general surgeons. There are many suggestions in facing with this problem. These include early operation, conservative management, endoscopic management and using of biologic material for promoting fistula closure. We are going to present a patient with gastric fistula following sleeve gastrectomy in a morbid obese patient treated with fibrin glue.

**Case report:** The patient is a 29 years old woman with BMI more than 49 underwent sleeve gastrectomy 2 years after gastric banding and band removal due to infection. Air leak test at the end of operation hadn't any leakage. The day after operation the patient underwent methylen blue and upper GI gastrograffin leak test. All of them showed leakage from proximal of stomach. The patient hadn't any sepsis and peritonitis. The volume of drainage was low. Then the patient underwent conservative management. After 2 weeks the volume of secretions didn't decrease. Then the patient was candidate for fistulography and endoscopy. It showed a fistula with 1 cm diameter and long tract in the proximal of stapler line. We decided to inject fibrin glue for decreasing the time of closure. For preparing the fibrin glue the plasma was freezed at -20 degree centigrade. Then gradually it defreezed in -4 degree centigrade and centrifuged with G2300 to separate fibrinogen. Then thrombin prepared from remained external opening of the fistula tract to sense it in the stomach. The injection repeated 3 times every 5 days to complete closure of the fistula. It took 35 days to complete closure of the fistula.

**Discussion:** The most common site of leakage after sleeve gastrectomy is proximal of stapler line near the GE junction. This is related to relative ischemia in this region. In the current case there was a thickened fibrotic gastric wall under the site of previous gastric band due to its irritation or infection. The stapler used in his point was blue Endo GIA 60-3.5 cartridge of COVIDIEN Company. During the firing of stapler extra force needed. It seems that the thickened gastric wall prevent complete firing of staples and making B configuration of them. We suggest longer yellow or green cartridge for thick tissue.

In the absence of sign and symptom of peritonitis or sepsis conservative management of GI fistula is preferred. It seems that fibrin glue can decrease the time of closure. In a long and narrow fistula tract it can make a framework of collagen and fibrin. Gradually the inflammatory cells and fibroblasts will precipitate in this framework and gradually narrow the lumen to complete closure of the fistula.

**Key Words:** Management, Fistula, Sleeve Gastrectomy





انجمن جراحان ایران  
شاهه غراسان

## Operative Strategy for the Difficult to close abdomen (Report of 22 cases)

Maddah Ghodratollah\*\*, Abdollahi Abbas, Shabahang Hossein\*

\*Associate professor of surgery Mashhad University of Medical Sciences

Address: Dr Maddah Gh.Ahmad Abad, Ghem Hospital, surgical endoscopic research center, Mashhad University of Medical Sciences, Mashhad, Iran

Email: Maddahgh@yahoo.com

Tel: +989151126186.

### Abstract

**Background:** Emergency abdominal surgery from both traumatic and non traumatic etiologies can lead to situations in which the abdominal wall cannot be closed primarily. Many techniques have been reported for temporary coverage of the exposed viscera but the result of various techniques remains unclear.

**Methods:** During 127 months ended in May 2012, we have treated 22 critically ill patients who had an open abdomen using plastic bags (Bogotá bag). There were 12 male and 10 female patients with an average age of 35 years.

The main indications for temporary abdominal coverage were as follows: planned reoperation in 13 patients, subjective judgment that the fascia closure is too tight in 7 patients, damage control surgery in one patient and development of abdominal compartment surgery in one patient. Surgical conditions requiring temporary abdominal closure was severe post operative peritonitis in 9 patients, post operative intestinal fistula in 6 patients, post traumatic intra abdominal bleeding in 3 patients and intestinal obstructions in 4 patients.

**Results:** Length of hospitalization was  $45 \pm 23.25$  days and the mean total number of laparotomies was  $6.2 \pm 3.75$  times per patient.

Three bowel fistulas occurred due to a missed injury at the time of initial operation that was discovered during changing the plastic sheet. They were unrelated to coverage technique. All of them were treated by repair of the defect and serosal patch by adjacent bowel loop. Only one patient underwent definitive closure within 6 months of initial operation. The remaining survivor has declined to have hernia repaired.

There were 5 early postoperative deaths that were not related to the abdominal coverage technique. Also there were 7 late deaths that were due to dissemination of malignancy with a mean survival time of  $20.8 \pm 13$  (range 2-54) months.

Currently 10 patients are alive at a min follow up of 45 months (15 to 127 months).

**Conclusions:** The Damage control surgery principle is often applied to the management of complex abdominal problems. This group of patients has a high morbidity and mortality.

**Key Words:** Damage control surgery (DCS); Open abdomen; Planned relaparotomy





انجمن جراحان ایران  
شأنه غرارات

## Presentation of special diaper for colostomy/urostomy patients

Marjan Joudi<sup>1</sup>, Mehdi Fathi<sup>2</sup>

<sup>1</sup> Assistant professor of pediatric surgery, Surgical Oncologic Research Center, Mashhad University of Medical science, Mashhad, Iran;

<sup>2</sup> Assistant professor of anesthesia, Cardiac anesthesia research center, Mashhad university of Medical science, Mashhad, Iran.

### Abstract

**Background:** Many children because of some disorders are not able to extract their urine or stool from regular way like healthy children. We present special diaper which designed for patients who have colostomy/urostomy.

**Methods:** After designing we produced some manufactured samples and used for three patients who had colostomy (2 patient) or urostomy (1 case). We considered extra orificial stool/urine leakage, parent satisfaction, costs and feasibility on the base of mothers report.

**Results:** Using of this diaper was cost-benefit, parents satisfaction was high and we didn't find leakage. mothers reported its feasibility.

**Conclusions:** This diaper helps to keep ostomy area dry regardless of its content

**Key Words:** Colostomy; Urostomy; Special Diaper



انجمن جراحان ایران  
شانه فراسات

## Results of laparoscopic surgery in ovarian masses with clinical follow-up as a mini-invasive approach in young women

Mojgan Karimi-Zarchi<sup>1</sup>, Mitra Roohi, Batoolosadat Hoseini,  
Seyed Hossein Hekmatimoghaddam

Associate professor of gynecology & obstetrics, Department of gynecology & obstetrics, School of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran E-mail: drkarimi2001@yahoo.com

### Abstract

**Background:** Laparoscopic surgery has become accepted in the last years as the gold standard in management of uterine adnexal masses, leading to a shift from open to laparoscopic operation especially for young women, because a minimally invasive approach is crucial for preserving fertility in this age group. The aim of this study was evaluation of results of laparoscopic surgery on adnexal masses regarding their benign/malignant entity, fertility preservation and recurrence after operation.

**Methods:** In this retrospective study, hospital records of all patients undergoing laparoscopic surgery for adnexal mass in Shahid Sadoughi hospital in Yazd, Iran during 2009 to 2012 were evaluated, which included 100 patients whose data were extracted and analyzed using statistical tests by SPSS software.

**Results:** From 100 patients, 6 cases were under 20 years old, 75 cases between 20 and 40 years old, and 19 cases were older than 40 years. The most common cause of admission was abdominal pain (in 38%). Most of them (87.8%) were cyst and the remainders were found solid or solid-cystic in ultrasound exam. Only 16.9% of them had abdominal free fluid, and 18.3% had past history of adnexal or ovarian surgery. Laparoscopic findings were 94.7% cyst, 4% solid, and 1.3% solid-cystic, denoting 88.8% agreement between laparoscopic diagnosis and ultrasound finding. Cystectomy was performed in 87.3% of patients, oophorectomy in 7.6%, biopsy in 2.5%, and cystectomy plus biopsy of suspicious areas in 2.5%. In 32.9% of cases the mass was in the right side, in 38.4% in the left side, and in 28.8% in both adnexae, which showed 76% agreement between laparoscopic and ultrasound findings. Size of the mass was less than 8 cm in 72.2% of cases. The mean duration of follow-up after laparoscopy was 3 months, in which 19.4% recurrence rate was observed, having no significant difference regarding the size of mass ( $P=0.694$ ). The rate of recurrence in right-sided, left-sided and bilateral masses were 7.1%, 22.7% and 25%, respectively ( $P=0.4$ ). The rate of recurrence in patients with weight loss vs those without weight loss was 33.3% vs. 18.8%, respectively ( $P=0.403$ ). Pathologic examination of masses revealed malignancy in only 2 cases.

**Conclusions:** Laparoscopic surgery is the accepted approach for ovarian lesions in adults, but proper selection of patients is important in terms of response to therapy, and good operational technique results in less recurrences. Nowadays, laparotomy is done only in cases suspected of malignancy. Laparoscopic surgery for treatment of ovarian masses has some advantages including less tissue damage, less bleeding, less perioperative complications, shorter hospital stay, and decreased cost. Generally, laparoscopy is associated with less adhesion, resulting in better fertility preservation. There is some concern about safety of laparoscopic surgery regarding potential danger of extrusion of cyst contents during removal of ovarian masses with probable extension of malignancy. Careful evaluation of ovarian lesions during surgery is important for prevention of inducing treatment resistance in malignant masses.

**Key Words:** Laparoscopy; Adnexal mass; Recurrence; Pathology



انجمن جراحان ایران  
شأنه غرارات

## Spontaneous pneumomediastinum with a rare presentation: case report

Bolvardi E, Pishbin E, Ebrahimi M, Gharaee A,  
Bagherian F

Assistant professor of emergency medicine, Imam Reza hospital, Mashhad University of medical science Email: bolvardie@mums.ac.ir

### Abstract

Spontaneous pneumomediastinum is an unusual and benign condition in which air is present in mediastinum. A 20 year-old male patient presented to ED with complaint of hoarseness and odynophagia from the day before, after weightlifting. The patient was nonsmoker and denied history of other diseases.

On physical examination he had no dyspnea with respiratory rate of 18 B/min, HR of 85 B/min, O<sub>2</sub> sat of 94% in room air and was normotensive. Throat examination and pulmonary auscultation was normal and no crepitation was palpable. We couldn't find subcutaneous emphysema in neck and chest examination. In neck and chest X ray we found that air is present around the trachea. There was no apparent pneumothorax in CXR. In cervical and chest CT free air was present around trachea and in mediastinum. Subcutaneous emphysema was also evident. But there was no pneumothorax.

The patient was admitted and went under close observation, O<sub>2</sub> therapy and analgesic. The pneumomediastinum and subcutaneous emphysema gradually resolved within a week by conservative therapy and he discharged without any complication.

Many different conditions could be trigger of pneumomediastinum but it is rarely seen in intense physical exertion such as weightlifters, bodybuilders and so on. Two most common symptoms are retrosternal chest pain and dyspnea. But the patient here complained of hoarseness and odynophagia instead of chest pain or dyspnea.



انجمن جراحان ایران  
شأنه غرسان

## Temporary abdominal Closure in the critically ill patients with an open abdomen (a report of 22 cases)

Maddah Ghodratollah, Abdollahi Abbas,  
Shabahang Hossein

### Abstract

**Background:** Emergency abdominal surgery from both traumatic and non traumatic etiologies can lead to situations in which the abdominal wall cannot be closed primarily. Many techniques have been reported for temporary coverage of the exposed viscera but the result of various techniques remains unclear.

**Methods:** During 127 months ended in May 2012, we have treated 22 critically ill patients who had an open abdomen using plastic bags (Bogotá bag). There were 12 male and 10 female patients with an average age of 35 years.

The main indications for temporary abdominal coverage were as follows: planned reoperation in 13 patients, subjective judgment that the fascia closure is too tight in 7 patients, damage control surgery in one patient and development of abdominal compartment surgery in one patient. Surgical conditions requiring temporary abdominal closure was severe post operative peritonitis in 9 patients, post operative intestinal fistula in 6 patients, post traumatic intra abdominal bleeding in 3 patients and intestinal obstructions in 4 patients.

**Results:** Length of hospitalization was  $45 \pm 23.25$  days and the mean total number of laparotomies was  $6.2 \pm 3.75$  times per patient.

Three bowel fistulas occurred due to a missed injury at the time of initial operation that was discovered during changing the plastic sheet. They were unrelated to coverage technique. All of them were treated by repair of the defect and serosal patch by adjacent bowel loop. Only one patient underwent definitive closure within 6 months of initial operation. The remaining survivor has declined to have hernia repaired.

There were 5 early postoperative deaths that were not related to the abdominal coverage technique. Also there were 7 late deaths that were due to dissemination of malignancy with a mean survival time of  $20.8 \pm 13$  (range 2-54) months.

Currently 10 patients are alive at a min follow up of 45 months (15 to 127 months).

**Conclusions:** The Damage control surgery principle is often applied to the management of complex abdominal problems. This group of patients has a high morbidity and mortality.

**Key Words:** Damage control surgery (DCS); Open abdomen; Planned relaparotomy.



انجمن جراحان ایران  
شاهه غراسان

## The Histochemical Effects of Garlic on Ischemia Reperfusion-Related Injuries in Vascular Trauma of Lower Limbs in Rat

Hossein Taheri

*Vascular And Endovascular Surgery Research Center, Emam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Science, Mashhad, Iran.*

### Abstract

**Background:** The aim of this study was to evaluate the effect of Garlic on ischemia-reperfusion syndrome.

**Methods:** Thirty-six adult male Wistar albino rats were randomized into three experimental groups of 12: Group C with no ischemia or reperfusion. Groups I/R and I/R+G had 2.5 hours of ischemia and of two hours of reperfusion by means of clamping of the common femoral artery. The animals of Group I/R+G were treated with P.O Garlic (10 mg/kg) 3 Days and 30 minutes before reperfusion. At the end of reperfusion, samples were taken for histological evaluation and biochemical analysis. Parameters studied were biopsies of the soleus muscle, level of lactate, creatine phosphokinase, lactate dehydrogenase, sodium, potassium, calcium and arterial blood gasometry.

**Results:** In I/R group, the levels of K, CPK, LDH & P increased dramatically contrast with groups C and IR+M ( $P < 0.05$ ). A significant decrease in  $HCO_3$  was found in I/R Group in comparison with Group IR+G and C ( $P < 0.001$ ). In Group IR+G, lactate level decreased dramatically compared to other groups ( $P < 0.001$ ). Histological injury in I/R+G was found to be less than in I/R group ( $P < 0.05$ ). There was no significant difference in  $PO_2$ , pH, carbon dioxide, partial pressure of oxygen, Na & Ca in three groups ( $P > 0.05$ ). Histological change in the group C and group G didn't differ significantly, but the difference in group I/R was significant compared to group C and IR+G ( $P < 0.05$ ).

**Conclusions:** We suggest that Garlic has protective effect against I/R syndrome and may reduce the morbidity following revascularization surgery in vascular trauma.

**Key Words:** Garlic; Ischemic-Reperfusion syndrome; Vascular trauma; Antioxidants



انجمن جراحان ایران  
شانه فراسات

## The prevalence of tuberculosis in recipients of renal transplantation

Feizzadeh B, Mojahedi MJ, Aghdam B, Hekmat R

### Abstract

**Background:** The aim of this study is evaluation of tuberculosis (TB) prevalence after renal transplantation.

**Methods:** 508 patients who were undergone renal transplantation surgery, from 1999 to 2005 and tuberculosis prevalence was evaluated in these cases.

Diagnostic interventions such as sputum, smear, pleural biopsy, CXR, bronchoscopy, BAL and trans bronchial biopsy of the lung and lymph node biopsy were done if there was fever, pulmonary signs or persistent lower urinary tract symptoms or adenopathy. Then statistical methods were performed, in consideration of age, sex, method of dialysis, cause of CRF and the interval between transplantation to TB diagnosis.

**Results:** Among 508 patients, 9 cases (1.75%) were infected by mycobacterium tuberculosis in a 1-14 years follow up period (mean 4.5 years).

There was a positive PPD test (more than 10mm) in 64 cases(12.4%) before transplantation but among these recipients active pulmonary TB was happen only in one patient(1.72%) after transplantation and other 8 TB cases were among 444 patients with negative PPD test (1.77%), so there wasn't any significant statistical difference between two groups ( $p>0.05$ ).

CXR was normal in both renal donor and recipient before surgery and there wasn't any history of TB in all of cases.

Hemodialysis was used in 432 patients(85%) and CAPD was used in 76 cases (15%) before transplantation: TB was reported in 9 cases (1.75%) after surgery which 5 cases had pulmonary TB, 2 cases had pleural TB, one case had lymph node TB infection and native kidney TB was seen in one patient. 5 cases (55%) of tuberculosis were happened in the first year after surgery, 3cases (33.3) in the second year after surgery and 1 case (11.1%) in third year. There wasn't any relation between TB incidence and age, sex, cause of CRF and method of dialysis. Four cases (44.5%) had graft rejection before diagnosis of TB and 2 cases (22%) had rejection after anti TB treatment. One of patients was died in the first year after transplantation, because of severity of pulmonary involvement and 2 cases needed dialysis again because chronic rejection.

**Conclusions:** Prevalence of TB in our center was less than other reports which maybe due to routine INH prophylaxis in PPD positive recipients cases; but further studies with more cases are needed. Most TB infections happened in the first year after transplantation and pulmonary TB was more prevalence.

**Key Words:** Tuberculosis; Renal transplantation; Prevalence; PPD test



انجمن جراحان ایران  
شأنه گزارشات

## Thoracic injury due to upper extremity gunshot wound; A case report

Pishbin Elham, Gharaee A, Reihani H

*Assistant professor of emergency medicine, Imam Reza Hospital, Mashhad University of Medical Science, Mashhad, Iran;*

### Abstract

**Introduction:** Civilian gunshot wounds are uncommon injuries, but it is going to be a growing problem these days. Here we present an interesting case of chest gunshot injury with the entrance site in the right arm.

**Case presentation:** A 28 year old man presented to our emergency department after being shot while running away with his right arm in abduction. The entrance site was in the mid lateral of the right arm but we did not find any exit wound (figure 1). The patient was agitated and complained of severe back pain and breathlessness.

On primary survey he had tachypnea (RR=30), BP was 100/60, HR=115 and O2S=89%. Breath sounds were decreased in right hemi thorax and the patient was in respiratory distress. In FAST exam fluid was seen in right hemi thorax. Chest tube was inserted and 400 cc of blood was withdrawn and the patient feels better. Portable chest X ray revealed the bullet in the left hemi thorax (figure 2). Pneumopneumothorax was also present.

The patient was transmitted admitted to the ICU. We followed the patient. He also complained of numbness of his lower limbs. Sensory level was at T10. In thoracic vertebrae CT scan T7 spinous process and posterior elements fracture was obvious but the spinal cord was intact. (figure 3). Neurosurgery consult did not recommend emergent intervention for spinal injury.

The patient also complaint of numbness of his lower limbs with Sensory level at T10. In thoracic vertebrae CT scan T7 spinous process and posterior elements fracture were discovered. The spinal cord was intact and stable in CT scan. Neurosurgery consult did not recommend emergent intervention for spinal injury.

More investigations were done and major vessels injuries and aerodigestive injuries were ruled out.

After 14 days the patient fully recovered and discharged from hospital with no complication. He is still under follow up visits in both surgery and neurosurgery services.

**Conclusions:** Proximal of upper extremity and shoulder gunshot wounds should not be neglected and considered as an isolated trauma. Chest examination should be done carefully to rule out serious injuries. Estimated bullet trajectory cannot always be true. More investigation would be needed to determine the real injury. Sometimes things are not as easy as they appear.

**Key Words:** Thoracic Injury, Gunshot Wound





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شأنه غرانت

## Tizanidine pre-medication in post operative pain after total hip replacement

Tabari M<sup>1</sup>, Alipoor M<sup>1</sup>, Alizadeh K<sup>2</sup>, Zirak N<sup>1</sup>, Kashani I<sup>3</sup>

<sup>1</sup>Department of Anesthesiology, Faculty of Medicine, Mashhad University of Medical Science, Mashhad, Iran.

<sup>2</sup>Faculty of Medicine, Mashhad university of Medical Science, Mashhad, Iran.

<sup>3</sup>Resident of Anesthesiology, Mashhad University of Medical Science, Mashhad, Iran.

### Abstract

**Introduction:** Pain is the most common complication after surgery. Different prevalence reported in different operations. Postoperative pain is one of the most important factors in patients' dissatisfaction which is associated with conditions like lack of movement, difficulty in breathing, atelectasis, dehydration and electrolyte imbalance in patients. Tizanidine is an alpha 2 agonist drug. Alpha 2 agonists have sedative, hypnotic, analgesic and sympatholytic effects (26). They have at least three receptors A (peripheral), B and C (central). Sympatolysis, analgesia and sedation is due to presynaptic B and C receptors. They affect locus ceruleus and spinal cord (1). Anti-hypertensive effect of alpha 2 agonists depends on reduced central sympathetic release and activating central imidazole receptors and usually is not associated with orthostatic hypotension (2), but alpha 2 agonists reduce renal arterial resistance without reducing renal blood flow (3). Use of alpha 2 agonists as oral, epidural or intrathecal has analgesic effects (1). They have good effects on reducing heart rate, vascular resistance and myocardial oxygen consumption (3). These drugs could significantly reduce ischemic cardiac events and peri-operative cardiac death in vascular surgery (4). They are successfully used to control alcohol, opioids, benzodiazepine and ecstasy withdrawal (5). In laparoscopic surgeries, alpha 2 agonists could control hemodynamic changes and reduce anesthetic need (32). Tizanidine, as an alpha 2 agonist, has good GI absorption, hepatic first pass effect, renal excretion and protecting effects on stomach (6,7,8,9). It has successfully used to reduce pain after abdominal surgery (10). Also it has used for sedation and control of hemodynamic changes after heart surgery (11).

**Methods:** Our goal was to determine the efficacy of tizanidine in pain changes in hip arthroplasty patients undergoing general anesthesia. We randomly divided patients in two groups, each has 20 patients with ASA class 1, 2. Exclusion criteria were death or sending to ICU, addiction to opioids, use of ketamine or corticosteroids during operation, pregnancy and ischemic heart disease. In one group, 4mg tizanidine was given 60 minutes before surgery. The other group received no drug before surgery. Both groups were anesthetized with 0.05 µg/kg midazolam, 2-3 µg/kg fentanyl, 0.2mg/kg cisatracurium and 2mg/kg propofol. We used 100µg/kg propofol and divided doses of 0.02-0.04µg/kg fentanyl to maintain anesthesia. Surgery has taken place with similar techniques and same surgeons. Pain score measured by a pain ruler in 4, 6, 12 hours after surgery. Patients' heart rate and blood pressure were also recorded. Data analysed by SPSS 16.

**Results:** There were 40 patients in this study. Half of our patients were women. Average age of women undergone surgery was 63 years which was higher than men. Pain score in Tizanidine group, was significantly lower than control group, at 1 hour after oral ingestion of Tizanidine (before induction of anesthesia) as well as 6 hours after surgery ( $p < 0.001$ ). Heart rate and systolic blood pressure in Tizanidine group an hour after taking Tizanidine (before induction of anesthesia) and 6 hours after surgery were less than the control group ( $p < 0.001$ ). But diastolic blood pressure, in Tizanidine group did not change. Tizanidine, did not make a significant difference in heart rate and blood pressure of the patients 12 and 24 hours after surgery.





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**Conclusions:** Our study showed that oral administration of 4 mg tizanidine, an hour before painful orthopedic surgery (total hip replacement), can significantly reduce patients pain. Also Tizanidine resulted in better control of blood pressure and heart rate without any hypotension or bradycardia episodes. Tizanidine is a safe and low price drug and it seems to be effective to inhibit hemodynamic creases, so it is rational to consider its use as a premedication drug.

**Key Words:** Pre-Medication; Pain; Hip Replacement; Tizanidine



انجمن جراحان ایران  
شأنه غرارات

## Traumatic hip dislocation in a 3 year old boy; case report

Ebrahimi M, Bolvardi E, Gharaee A

*Assistant professor of emergency medicine, Imam Reza Hospital, Mashhad University of Medical Science, Mashhad, Iran;*

### Abstract

**Background:** Traumatic hip dislocation (THD) in children is a rare condition and could have adverse complications. Diagnosis of hip dislocation in children is very important, misdiagnosed hip dislocation would lead to avascular necrosis.

**Methods:** A 3 year old boy was presented to ED by his parents with complaint of dresser falling on the baby. The boy was alert, the airway was intact and chest examination was normal. Vital signs were no negative point on primary survey. On secondary survey he had hold his right hip flexed, adducted, and internally rotated.

As it is seen posterior dislocation of right hip is obvious in plain hip radiography (figure 1). He was admitted by orthopedics service and less than 6 hours from the trauma onset, close reduction was performed for him (figure 2). Then he was treated with hip spica after reduction. He had excellent hip function after recovery period.

**Conclusions:** In children less than 5 years, low energy trauma would lead to hip dislocation, whereas in adults dislocation is usually occurs by a major trauma. THD usually cause posterior hip dislocation. Urgent closed reduction is done in the OR, or the ED. ED reduction appears to be safe. Neglected THDs need open reduction. Complete reduction of hip and maintenance of hip with hip spica usually have excellent outcome even if avascular necrosis happen.

**Key Words:** hip dislocation; trauma; case report