



BOOK OF ABSTRACTS

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DEBATE SECTION



PSYCHOSURGERY: NEW PERSPECTIVES FOR PSYCHIATRIC DISORDERS

PROs vs CONs

TEAM A: PRO

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Introduction: Nowadays we are getting more familiar to mental illnesses. When it comes to treating a patient with this type of illness the first line therapy, after psychotherapy, is represented by different types of drugs. But what if this type of medication doesn't work? What if your patient is one of the exceptions? In this case there is a controversial, but with a great potential alternative surgery. This is a surgical alternative called psychosurgery, or neurosurgery for psychiatric disorders.

Argument 1: In order to support our statement we consider important that neurosurgery is an innovative speciality. New techniques appear often, technology evolves faster and, as a result these facts could potentially lead to a better outcome for the patients undergoing this type of procedure.

Argument 2: Secondly, the rate of patients suffering from mental illnesses rised in these years of pandemic. There are more patients suffering from anxiety or depression and, also, patients who relapsed in this period. A part of this patients do not respond to the drugs they used to, so, they could potentially be possible candidates for this type of surgery.

Conclusion: To sum up, it is essential that the medical professionals are open to more options of management for mental illnesses. Even though this type of procedure may seem radical and controversial, with further research it can give better perspectives to the treatment of psychiatric disorders. This type of affections represent for different communities controversies, or they are sometimes not even considered real. So, even though now psychosurgery is a controversy, why should we stop now when there is continuous development? Why should we stop finding better ways of treating the sometimes called "imaginary diseases"?

KEYWORDS: PSYCHOSURGERY, PSYCHIATRIC, CONTROVERSY, IMAGINARY DISEASES

PSYCHOSURGERY: NEW PERSPECTIVES FOR PSYCHIATRIC DISORDERS

PROs vs CONs

TEAM B: CON

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Introduction: Psychosurgery has been one of the most controversial topics in the field of medicine. This surgical correction of psychiatric disorders was a widely used technique reaching its peak in the 1950s. However, with the development of pharmacotherapy, electroconvulsive therapy and other methods to treat psychiatric ailments, the rapid downfall of psychosurgery came mainly due to the irreversible nature of the treatment. Blind surgical methods were used which altered the structure of the brain either by resection or by ablative procedures. Structural alterations have been a matter of debate as the proper functioning of the areas chosen to be operated on are still poorly understood, hence patients usually came out of the surgery with side effects like personality changes and intellectual deficits.

We present two arguments against the idea that psychosurgery represents the future of modulating Psychiatric Disorders. They were constructed following the steps: brainstorming, literature review done on PubMed with the keywords `psychosurgery`, `lobotomy`, `neurosurgery for mental disorder`, independent evaluation of which side each author would like to defend, reaching an agreement on which side to defend and synthesising the arguments. Our review resulted both in medical ethics papers and novel treatments presented as case studies, series of cases, retrospective studies, etc. Grey literature and non-scientific opinion pieces were not considered for this abstract.

Argument 1: Psychiatric illnesses in today's world have been treated using evidence-based non-invasive therapy like Pharmacotherapy and Cognitive Behavioural Therapy, which have shown to have good results. On the other hand, no randomized clinical trial has shown large scale positive outcomes of psychosurgery.

Surgery is invasive, in particular neurosurgery can leave a lot of unwanted side effects and complications: brain edema, elevated intracranial pressure (ICP), seizures, intracranial hemorrhage, ischemic infarction, and cranial nerve palsies. Is it worth the risk when there are evidence-based options to treat the mental health conditions without surgery? Even now when we have individuals suffering from ailments like cancer where the body has a mass growth that contributes no function, doctors aim to treat it as non invasively as possible with chemotherapy or radiotherapy, to prevent surgically damaging any part of the body. Trying to treat psychiatric illnesses surgically where the depth of our knowledge on the function of the different structures of the brain and its primary contribution to the psychiatric ailment in the first place is very limited and not complete, could do more harm than good.

Argument 2: Albeit there is the standard idea of the different structures of the normal brain in anatomy, humans across the world don't necessarily have the same connections between these different parts or have differences in the physiological functioning aspect of the brain. This has been shown in fMRI images where different disorders have different brain maps, and PET scans which demonstrated the different levels of neurotransmitters between different psychiatric disorders. Neurodiversity is a term used to describe patterns of white matter, blood flow or neurotransmitter that deviate from the average human

brain, but who decides what is normal and what needs to be surgically fixed? Most disorders present complex pathophysiology with no single cause. This multiplicity poses questions on psychosurgery therapeutic efficacy, which aggravate the surrounding ethical concerns.

Conclusion: The existing evidence (or lack thereof) undoubtedly leads to an unbalanced pros and cons of psychosurgery. When talking about the future of neuromodulation it is, therefore, not necessary to backtrack obsolete interventions that haven't been proven patient safe. Irreversible interventions with lack of strong evidence supporting it, on diseases with unknown multitude of causes, are an experimental approach with no proven benefits to one's health.

KEYWORDS: PSYCHOSURGERY, MEDICAL ETHICS, EVIDENCE-BASED, PSYCHIATRIC DISORDERS

ONSITE DEBATE COMPETITION: NISSEN FUNDOPPLICATION VS LINX FOR GASTRO-OESOPHAGEAL REFLUX DISEASE

PROs vs CONs
TEAM A: LINX Device

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Introduction: Gastroesophageal reflux disease is the most prevalent digestive disease, with great importance in terms of chronicity, impact on quality of life and potential complications, affecting more than 1 billion adults globally. Doctors aim to find the optimal surgical solution to relieve the symptoms of the patients who fail to respond to acid-suppression therapy. Compared to the standard technique, the revolutionary LINX system conserves the anatomy of the lower esophagus, bringing, at the same time, great advantages regarding surgical approach, length of intervention and management of complications. The references selected for this abstract were relevant articles found on PubMed in which the benefits of the two techniques were compared.

Argument 1: One of the most important aspect of the LINX surgery is its respect to the anatomy and physiology of the esophagus and fundus of the stomach. LINX successfully improves upon the limitations of the Nissen Fundoplication, allowing the passage of the food bolus while preserving the patient's ability to belch (95.2 vs. 65.9%, $p=0.00001$) and to emesis (93.5 vs 49.5%, $p=0.0001$). Studies have shown that the LINX surgery has better outcomes for patients compared to the standard approach, as, in addition to the release of heartburn and regurgitation, it also leads to less bloating and flatulence post surgery. Moreover, LINX allows patients to resume to a solid diet right after the intervention, whereas The Nissen Fundoplication imposes only liquid alimentation for the following two months. In this regard, the new procedure has the potential to bridge the treatment gap between maxed out dose of medical treatment and the anatomic altering Fundoplication.

Argument 2: Another aspect worth considering is related to the convenient properties of the newer surgical treatment. It uses a standardised device designed to limit technical variability, so it can be broadly implanted with surgical techniques routinely used by laparoscopic surgeons, thus allowing more consistent and predictable results between patients. The mean operative time for LINX is 73 min compared to 118 min for Fundoplication ($p=0.001$). In addition, this procedure is unique in that it is easily reversible if needed, leaving esophago-gastric anatomy intact and allowing other surgical procedures to be carried out in the future. While both interventions may lead to dysphagia, the advantage of LINX is that, if the symptom does not self-resolve within 3 months, an endoscopic balloon dilatation can be performed in attempt to relieve the complication while maintaining the normal function of the LINX device.

Conclusion: Overall, considering the arguments above, the LINX device, after several years of practice, has been shown to bravely respond to the medical challenges of chronic acid reflux, being as effective as

Nissen Fundoplication while having distinct advantages. It is, therefore, the optimal solution for

practitioners and patients in case of failure of pharmacological therapy.

KEYWORDS: LINX, NISSEN FUNDOPLICATION, ESOPHAGO-GASTRIC ANATOMY, GASTROESOPHAGEAL REFLUX DISEASE, SURGICAL MANAGEMENT OF GERD

ONSITE DEBATE COMPETITION: NISSEN FUNDOPLICATION VS LINX FOR GASTRO-OESOPHAGEAL REFLUX DISEASE

PROs vs CONs

Team B: NISSEN Fundoplication

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Introduction: Nowadays, gastroesophageal reflux disease (GERD), is a very impactful disease, with a prevalence of almost 27.8% among adults in the western culture (Shivani et al.). Currently, the 360° Nissen fundoplication involves a laparoscopic procedure that remedies gastroesophageal reflux by creating a grasping valve component, situated at the base of the oesophagus by the gastric fundus. It was named after Doctor Rudolph Nissen, who first performed it in 1955 and it is considered the gold standard surgery for GERD, alongside its preoperative benefits, but also its outcomes.

Argument 1: The first argument that supports the efficacy of the Nissen technique is represented by its good long-term outcome, with 92.4% of patients reporting resolution in heartburn symptoms at 10 years, and 80% after 20 years. (Sterbling et al.). Research has also shown that most individuals who undergo laparoscopic fundoplication never again require medicine for the treatment of GERD, such as proton pump inhibitors (PPI). The usual given medication has been broken down by latest data, which has proven that their effectiveness is only valid for 32% of patients, with complete sign relief. Furthermore, there have been various reports including their side-effects and adverse reactions, for example, pneumonia, Clostridium difficile defilement or thrombocytopenia, along iron need and supplement B12 inadequacy. (Modi et al.) By the mid-1990s, surgeons in Europe and Australia adopted partial fundoplications, such as the posterior (Toupet) fundoplication, and the anterior (Dor) fundoplication as better strategies, by wrapping less than the full circumference of the esophagus. Hence, they managed to adapt to certain patients' esophageal dysmotility, whilst ensuring both a long-term reflux control, but also a normalization of esophageal acidification in more than 90% of patients. (Watson et al) Although some of the post-operative risks include gas bloat syndrome, clinical trials have shown that there is 0% risk of required post-op endoscopic dilation (Sheu et al.), with patients able to return home the day of the medical procedure.

Argument 2: The second argument is aimed to reinforce the belief that the Nissen technique is more efficient, thus focusing on the pre-operative benefits of this procedure. Coverage for certain anti-reflux procedures can be a little questionable, but that's not an issue with the Nissen, which is generally covered in some capacity by all insurances. Another pre-operative benefit of the Nissen fundoplication is that it does not require pre-authorization, as it is the earliest available procedure worldwide. Nowadays, the classic Nissen fundoplication procedure can be robotically performed, the laparoscopic alternative being a cornerstone in the treatment of gastro-esophageal reflux disease (GERD) with sliding hernia. The best outcomes are achieved in those patients who have some response to medical treatment compared to those who do not. Robotic fundoplication is considered a novel approach in treating GERD with paraesophageal hiatal hernias, even those larger than 3 cm, allowing the surgeon to have an increased dexterity and feasibility, with comparable outcomes compared with traditional laparoscopic

approaches. The Nissen technique also confers a definable benefit with a significant pulmonary advantage in both neurologically normal children and those with neurologic impairment.

Conclusion: Numerous studies have shown that laparoscopic Nissen fundoplication may have advantages over the traditional open approach, including improved cosmesis, reduced morbidity, shorter hospital stay, decreased respiratory complications, and faster recovery. Therefore to conclude the arguments mentioned above, this procedure is one of the most studied anti-reflux surgeries, with over 60 years of data on the durability of the procedure, which provides, first of all, safety for the patient.

KEYWORDS: LAPAROSCOPIC NISSEN FUNDOPLICATION, GERD, HIATAL HERNIAS, ESOPHAGEAL DYSMOTILITY, PROTON PUMP INHIBITORS

ORAL SECTION



A REVIEW ANALYZING DIFFERENT SURGICAL APPROACHES OF ARNOLD-CHIARI MALFORMATION TYPE I

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Type: Review

Introduction: All four types of Arnold- Chiari malformations involve cerebellar anomalies; type I (CMI), which is the most common, consists of herniation of the cerebellar tonsils into the foramen magnum, thus crowding the craniocervical junction. In case of serious clinical significance, surgery is the standard approach, with many techniques yielding satisfactory results. The purpose of this review is to evaluate and compare the clinical outcomes of different surgical methods in the treatment of CMI patients, thus helping to guide future treatment decisions for these patients.

Materials & Methods: For this review, I analyzed 13 original studies, systematic reviews, and meta-analyses published on the topic between 2001 and 2021. The PubMed, ScienceDirect, and Web of Science databases were searched for articles, the keywords being: “Chiari malformation I”, “surgical techniques”, “posterior fossa decompression with duraplasty” (PFDD), “dura splitting decompression” (DSD). Selection criteria include: diagnosis of CMI confirmed by MRI, randomized or non-randomized controlled trials, comparison between different therapeutic approaches.

Results: The standard surgical technique for CMI is a PFDD, thus creating additional space for the cerebrospinal fluid to circulate. Some surgeons prefer the less complex procedure named DSD because it does not involve entering the intradural space. Comparing these two options, I found no significant difference in terms of clinical and syringomyelia improvement, wound infection, or reoperation need. On the other hand, the convenience of DSD resides in significantly decreased operation time, hospitalization period, and overall postoperative complications mainly concerning CSF leak, aseptic meningitis, and pseudomeningocele occurrence.

Conclusion: Taken together, the reviewed studies suggest that PFDD has clinical and radiological improvement outcomes comparable to DSD, but the latter holds certain advantages that are not to be neglected. Further studies on this topic are necessary in order to better understand the implications of all surgical methods and also find novel therapeutic options for symptomatic CMI patients.

KEYWORDS: ARNOLD-CHIARI MALFORMATION TYPE I, SURGICAL TECHNIQUES, POSTERIOR FOSSA DECOMPRESSION WITH DURAPLASTY, DURA SPLITTING DECOMPRESSION, CLINICAL IMPROVEMENT, POSTOPERATIVE COMPLICATIONS

ARTERIAL DIVESTMENT TECHNIQUE FOR PANCREATIC CANCER

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Type: Case Report

Introduction: With the lowest survival rate of all cancers in Europe, the pancreatic cancer is usually diagnosed in advanced stages. Curative treatment of pancreatic cancer is only possible after clear resection margins and the arterial divestment technique may ensure complete tumor removal.

Case Presentation: A 57-years-old female presented electively with abdominal pain, weight loss and weakness for a month. The diagnosis of the malignant transformation of the pancreatic cyst in the pancreatic tail has been already established by CT abdomen/pelvis with intravenous contrast. The other abdominal organs were unremarkable. The patient was admitted to the surgical ward and planned for surgery.

The procedure was to be performed laparoscopically but due to the intraoperatively established encasement of the vessels by the cancer, conversion has been made. Posterior radical antegrade modular pancreatosplenectomy (RAMPS) was performed among with subtotal gastrectomy because the lack of ventricular venous outflow. Arterial divestment was done to the celiac trunk and superior mesenteric artery and the portal vein was resected partially longitudinally at the confluence of the splenic vein. Final pathological evaluation confirmed clear resection margins.

The postoperative period was uneventful and the patient was safely discharged on the thirteenth day.

Conclusion: To conclude, in such cases with locally advanced tumors radical resection could be managed by arterial divestment technique. This could improve chance of long-term survival and better quality of life.

KEYWORDS: PANCREATIC CANCER, ARTERIAL DIVESTMENT

ARTIFICIAL NEURAL NETWORK-BASED FULLY AUTOMATED SEGMENTATION OF THE RIGHT LIVER LOBE: A COMPARATIVE EVALUATION

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Type:Original research/Cohort study/Clinical study

Introduction: The estimation of liver and its segments volume are crucial for the assessment of postinterventional complication risk as well as therapy success. A standard manual segmentation of computed tomography (CT) images is quite subjective and very time-consuming. The aim of this research is to compare the accuracy between fully automated segmentation of the right liver lobe (segments V-VIII) based on artificial neural networks (ANNs) with the manual segmentation.

Materials & Methods: In the study 98 subjects were enrolled. A manual segmentation and volumetry of liver, identifying the right liver lobe using venous phase CT images, were conducted. 80 (81,63 %) of manually segmented CT images were used as the ANNs training group, 18 (18,37 %) were used for the comparative evaluation of volumetry methods (validation group).

Results: No statistically significant differences of subjects' basic characteristics were detected between training and validation groups. A comparison of both segmentation methods showed a high similarity with an average Dice similarity coefficient of $0,90\pm 0,05$. No statistically significant differences between manually and automatically determined volume of the right liver lobe were found ($p=0,91$). Volume percentage difference between the methods on average was $4,17\pm 5,79$ %, volume absolute error - $47,13\pm 64,27$ ml.

Limitations: Higher similarity scores and accuracy could be reached by increasing the number of subjects in the ANNs training group.

Conclusion: A fully automated ANNs-based segmentation of right liver lobe did not statistically significantly differ from manual. Moreover, the accuracy of our ANNs has reached a State-of-the-art result. Because of its speed and autonomous image processing the ANNs-based liver segmentation could soon become a new gold standard in the assessment of risk before any liver interventions, especially before major surgery of the liver.

KEYWORDS: HEMIHEPATECTOMY; LIVER SEGMENTATION; ARTIFICIAL NEURAL NETWORKS; ARTIFICIAL INTELLIGENCE

CASE REPORT: TIBIA STRESS FRACTURE AFTER REVISION TOTAL KNEE ARTHROPLASTY WITH HINGE PROSTHESIS

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Type: Case Report

Introduction: Stress fractures after revision Total Knee Arthroplasty (TKA) are usually observed in distal femur with incidence rate up to 38%. This clinical manifestation is rare in the area of tibia with percentage being as low as 0.4%. Giving persistent pain, swelling and possibly being an omen of other implant related issues, it is worth to bear in mind the possibility of stress fractures in atypical sites and what can be done to avoid it.

Case Presentation: Patient is a 74 year-old female who complains of pain below left knee with weight bearing (VAS 4) and swelling. Two months prior to this the patient experienced trauma by falling, which effected in displaced comminuted periprosthetic distal femur fracture (type III according to Classification of Supracondylar Fractures of Distal Femur). It was managed via revision arthroplasty with modular segmental DePuy LPS™+M.B.T. Rotating Hinge endoprosthesis due to extreme comminution of the distal fragment and the need to replace lost bone stock (T2b according to Anderson Orthopaedic Research Institute classification). X-ray revealed tibia stress fracture medial to cementless prosthesis stem Type. Remission was achieved over 2 months by reduced weight-bearing and analgesics. The patient remained uneventful.

Conclusion: TKA revisions are projected to grow multiple times. Hence, one should take into account every item that might prevent stress fractures such as in this case. As studies state, short stems may be superior with little chance of stress fracture due to lower stress shielding and bone density reduction. In this case, only long stem was a viable option because of bone loss. Nevertheless, total cementation technique might have proven to be beneficial since tibia cortex was rather poor due to osteoporosis. It should be combined with proper endoprosthesis positioning, certain preoperative radiological, clinical examination and lifestyle corrections.

KEYWORDS: STRESS FRACTURE; REVISION TOTAL KNEE ARTHROPLASTY (REVTKA); ORTHOPAEDIC SURGERY

CORNEAL TRANSPLANTATION IN FUCHS' ENDOTHELIAL DYSTROPHY

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Type: Review

Introduction: Fuchs's endothelial dystrophy (FED) is a corneal disease in which the endothelial cells deteriorate or die prematurely and can lead to corneal edema and blurred vision. The most successful surgical technique is DSEK (Descemet stripping endothelial keratoplasty).

Materials & Methods: For this review were selected several studies published on PubMed that include 114 eyes of 105 patients (mean age 51, more women than men), that underwent DSEK, in which the patient's affected endothelium and Descemet's membrane are replaced with healthy corneal tissue from a donor. Complete 12-month follow-up was possible for every patient and the postoperative best corrected visual acuity (BCVA), corneal thickness and intra- and postoperative complications were evaluated.

Results: The mean BCVA improved significantly from one month (Snellen 20/70) to 12 months (Snellen 20/25). The mean graft thickness was 100 micrometers, total corneal thickness was 560 micrometers and mean cell-loss was 9% at 12 months after surgery. In early postoperative period, 23 (20%) eyes had donor dislocation and 3 (2.8%) eyes had air-induced pupillary block that were managed immediately. Button detachment was observed in 21.5% of the DSEK. Fourteen primary graft failures and 13 cases of high intraocular pressure were reported (9 had history of glaucoma and one had ICE Syndrome). In relation to the intra-operative complications, inverted implantation of the button (4%) and button-holing (2,5%) were noticed.

Conclusion: The continuous improvement of vision acuity in the first year after DSEK is accompanied by reduction in corneal haze, suggesting ongoing remodeling of the cornea after restoration of endothelium function. The recovery is rapid and intra- and postoperative complication rate is low compared to other techniques.

KEYWORDS: CORNEAL HAZE, DSEK, GRAFT THICKNESS, BCVA, PUPILLARY BLOCK

EX VIVO LUNG PERFUSION OR COLD STATIC STORAGE? SYSTEMATIC REVIEW AND META-ANALYSIS

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Type: Meta-analysis

Introduction: Lung transplantation is an accepted treatment option for patients with end-stage lung diseases that do not respond to conventional treatment. It is often considered as the treatment of the last chance with a strict qualification process. The number of patients waiting for transplantation still exceeds the number of potential organs. One of the breakthroughs was the development of ex vivo lung perfusion (EVLP) devices which allow to prolong organ preservation time and to extend lung donor pool through reconditioning of suboptimal lungs. The aim of this meta-analysis is to compare EVLP and cold static storage.

Materials & Methods: Thorough literature search in Medline and Google Scholar databases was performed. Inclusion criteria consisted of retrospective or prospective studies showing the center's experience with ex vivo lung perfusion. Control group had to be composed of patients transplanted with lungs preserved using cold static storage. Data was extracted manually by one reviewer. Forest plots were generated using Meta Analyst Software while heterogeneity was assessed using I² statistic.

Results: Out of 1230 articles after initial search, 13 met the inclusion criteria. Studies were published between 2012 and 2020. The total amount of patients was 606 in EVLP group and 1903 in control group. Donor age did not significantly differ between two groups (MD -1,2 95% CI -4,76 to 2,3). Oxygenation index statistically differed between EVLP and cold static storage groups (MD -142,2 95% CI -182,9 to -101,5). Primary Graft Dysfunction occurred less frequently after application of ex vivo lung perfusion (RR 0,69 95% CI 0,52 to 0,91).

Conclusion: This meta-analysis proves that ex vivo lung perfusion is a device that allows to extend lung donor pool. At the same time, it is a safe procedure with favorable outcomes after transplantation.

KEYWORDS: LUNG TRANSPLANTATION; EX VIVO LUNG PERFUSION

FAVORABLE TREATMENT STRATEGY FOR INTRACRANIAL ANEURYSMS: ENDOVASCULAR COILING OR SURGICAL CLIPPING?

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Introduction: Subarachnoid aneurysmal hemorrhage (SAH) is a type of stroke caused by the rupture of an intracranial aneurysm producing a bleeding into the subarachnoid space. SAH is associated with a mortality greater than 30%. The surgical treatment includes neurosurgical clipping (NSC) and endovascular coiling (EVC). The NSC is closing the patent vessel by placing a metal clip to obstruct the neck of the aneurysm. The EVC consists in a platinum coil being introduced in the aneurysm sac, inducing thrombosis. The aim of this review is to analyze the efficiency of the two procedures.

Materials And Methods: The review is based on fifteen articles published on PubMed, The Lancet, Cochrane Library between 2002-2021, which in total include 2.883 cases of patients with SAH, enrolled in mulTypele trials, being randomly assigned to NSC or EVC. The cases were compared regarding the effects and efficiency of the two techniques concerning the outcome and the postoperative complications. The inclusion criteria: SAH proven by intra-arterial or CT angiography and an anatomically suitable aneurysm for either treatment. The exclusion criteria: traumatic SAH and the unsuitability of the patient for one or both procedures.

Results: All studies analyzed in this review proved that the EVC was favorable in terms of post-procedural complications and rehabilitation. It is however more predisposed to re-bleeding compared to NSC. The average outcome was favorable for the EVC group with a 81% probability as compared to the 77% probability of the NSC group for a good clinical outcome.

Conclusion: On the basis of this review it was concluded that NSC provides better results in terms of recurrency, re-bleeding and durability. However, the overall favorable outcomes were more frequent in the EVC rather than the NSC group.

KEYWORDS: ANEURYSM, CLIPPING, PLATINUM COIL, SUBARACHNOID, RUPTURE.

INUSITATE PSYCHIATRIC SURGICAL EMERGENCY: THE MAN WHO STABBED HIMSELF

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Introduction: The Emergency Department (ED) frequently hosts victims of injuries caused by psychiatric crises, either self-inflicted or not. A cross-sectional study showed that a quarter of trauma emergencies in London hospitals were due to knife stabbing, 8% being self-inflicted. Depression is the most common associated mental health condition to self-stabbing. Most victims are males ranging from 40 to 60 years old.

Case Presentation: A 49-year-old man presents to the ED with a single stab knife injury. He is brought in by an ambulance, called by his brother- who was the person he contacted right after stabbing himself in the right side of the abdomen. The man is taken to the Emergency Surgery Room for an exploratory laparotomy. The wound is 2cm long and has clearly perforated the fascia of rectus abdominis and transversus abdominis, however, no peritoneum perforation or foreign body are found during surgery.

Later, the patient reported consuming marijuana and alcohol daily after the loss of his son, two months ago. He had also lost motivation to leave the house and frequently expressed a desire to die to his family ever since. During admission morphine infusion 10mg/ml as needed and paracetamol 500mg orally, 4 times a day were prescribed for pain control. After psychiatric evaluation the patient was also prescribed an alcohol detox protocol with vitamins C, B12 and thiamine injections, as well as lorazepam. Ambulant care was requested upon patient discharge from ED.

Conclusion: While most stabbing injuries don't require surgery, abdominal ones will usually take the patient to the OR for antiseptic procedures, and verification of damage extension and foreign body presence.

Self stabbing is strongly associated with psychiatric conditions, thus, preventable through appropriate ambulatory care of depression, anxiety, TDAH, Autism spectrum disorders and several psychotic disorders. A timely ED response is paramount to safely stop bleeding and avoid wound borne infections.

KEYWORDS: EMERGENCY SURGERY, SELF-STABBING

RECONSTRUCTION OF LOWER EYELID DEFECT USING HUGHES TARSOCONJUNCTIVAL FLAP

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Type: Original research/Cohort study/Clinical study

Introduction: Hughes procedure (invented in 1937), which consists in a tarsoconjunctival flap advancement, is one of the best choices for repairing full-thickness lower eyelid defects in order to provide not only an anatomical and functional restoration of the eyelid, but also an aesthetic outcome. The objective of this study is to present the surgical steps and postoperative results of this technique, following basal cell carcinoma removal or trauma repair.

Materials & Methods: We report 10 consecutive patients who were admitted to the Ophthalmology Clinic of Saint Spiridon Emergency Hospital with tumors or trauma of the lower eyelid with significant loss of tissue (more than 2/3 of the length of the lower eyelid). In cases of carcinomas, the reconstruction was performed after the histopathological confirmation of oncological safety limits of the excision. The Hughes flap was advanced from the upper to the lower eyelid to reconstruct the posterior lamella. The reconstruction of the anterior lamella was performed using a skin-muscle advancement flap or a skin graft. The blood-supplying flap pedicle was divided three weeks after the first procedure.

Results: The patients presented a favourable intraoperative evolution with no early complications such as flap suture dehiscence. However, over an average one year follow-up, several complications occurred such as upper eyelid retraction (1 case), discontinuity of lid margin (1 case), lower eyelid erythema (1 case). No cases of severe complications such as ischemia or flap necrosis developed.

Limitations: The limits of the study are given by the retrospective nature and the reduced number of cases.

Conclusion: This study provides additional data on the efficacy of the Hughes procedure which remains a first choice surgical method for defects of the lower eyelid involving more than 50% of horizontal length. This reconstruction technique provides good functional and cosmetic results, optimal for situations where the controlateral eye maintains good visual acuity.

KEYWORDS: EYELID TUMOR, EYELID RECONSTRUCTION, HUGHES TARSOCONJUNCTIVAL FLAP

SMALL BOWEL INTUSSUSCEPTION IN INFANTS-CAUSE OF ENCEPHALOPATHY?

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Type: Case Report

Introduction: Intussusception is the most common cause of bowel obstruction in infants and may result in increased mortality rate in the lack of an early diagnosis and effective treatment. This case depicts an unusual presentation of intussusception encephalopathy, a problematic diagnosis in the absence of gastrointestinal symptoms.

Case Presentation: A 2-year-old boy with no medical history presented to the emergency room with an altered level of consciousness. Physical examination showed miosis and intermittent episodes of athetoid-like movements. The patient underwent an extensive search for metabolic, infectious, neurologic, and toxicologic etiologies with results within normal limits. Despite receiving treatment for meningoencephalitis and even seizures, the neurological impairment continued. The diagnosis of intussusception encephalopathy was presumed and an abdominal X-Ray raised the suspicion of a bowel obstruction. An abdominal ultrasound confirmed the diagnosis of an uncomplicated ileo-ileal intussusception. The patient underwent a surgical reduction and recovered fully postoperatively.

Conclusion: Miosis is considered to be caused by endogenous opioids released during the intussusception episode, which lead to secondary encephalopathy.

Decreased level of consciousness and miosis in the absence of toxic ingestion may hint to intussusception and serve as important clues to life-saving early diagnosis and prompt treatment.

KEYWORDS: ILEO-ILEAL INTUSSUSCEPTION, MIOSIS, DECREASED CONSCIOUSNESS, INTUSSUCEPTION, ENCEPHALOPATHY

SURGICAL MANAGEMENT OF FULL-THICKNESS MACULAR HOLES

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Type: Review

Introduction: A full-thickness macular hole (FTMH) is a full-thickness defect in the central retina and a relatively common cause of central visual loss, with a prevalence of about 3:1000. The aim of this review is to present three surgical techniques for managing FTMHs together with their anatomical and functional outcomes.

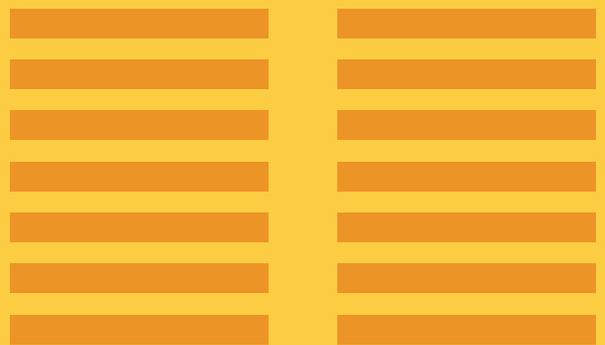
Materials & Methods: Several articles, published between 2011-2021, were selected after searching PubMed for "full-thickness macular hole", "ILM peeling", "ILM inverted flap" and "autologous retinal transplantation". After pars plana vitrectomy, the internal limiting membrane (ILM) in the macular region is peeled off in order to close the hole. Another technique consists of inverting the flap resulted from the maculorhexis and putting it in the hole to close it. Autologous retinal transplantation involves harvesting a neurosensory retinal graft and putting it over the FTMH. At the end of the surgery, depending on the technique performed, air, gas or silicone oil tamponade is used to keep the FTMH closed.

Results: In comparative studies, in large, stage 4 FTMHs, the closure rate was 96-98% for the inverted ILM flap technique, whereas in ILM peeling alone a closure rate of 70-88% was achieved. Functional improvements were seen in both techniques at 6 months postoperatively, but they were higher in the inverted ILM flap group. Regarding even larger primary or refractory FTMHs, a closure rate of 89% was achieved with the retinal autograft technique, in a 130 eyes study. The postoperative visual acuity improved from 20/500 to 20/225, with 43% of eyes gaining at least 3 lines of vision and 29% of eyes gaining at least 5 lines. Five cases of retinal detachment and 5 graft dislocations occurred.

Conclusion: All three surgical techniques of managing FTMHs offer both anatomical and functional improvements. Restoration of the external limiting membrane, ellipsoid zone and neurosensory layers alignment are keys to better final outcomes.

KEYWORDS: FULL-THICKNESS MACULAR HOLE, PARS PLANA VITRECTOMY, ILM PEELING, ILM INVERTED FLAP, RETINAL AUTOGRAFT

POSTER



A CASE OF ADULT ILEO-ILEAL INTUSSUSCEPTION SECONDARY TO ILEAL SUBMUCOSAL POLYP

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Type: Case Report

Introduction: Intussusception is defined as the telescoping of one portion of intestinal loop into the lumen of adjacent loop. It is common in children while rare in adults. Adult intussusception accounts for 5% of all cases and is substantially secondary to some other pathologic cause like intestinal strictures, carcinomas, polyps, lipomas, etc. Since these adult cases have a very high association with malignancy and chances of recurrence, it usually requires surgical resection.

Case Presentation: A case of a 28 year-old male was presented to the emergency department of Sola Civil Hospital, with the chief complaint of severe abdominal pain- central in location and colicky and spasmodic in character; associated with vomiting, anorexia and obstipation since a day.

On examination, pulse was 110/min, blood pressure 122/82 mm of Hg and temperature was normal. Abdomen showed distension. Palpation revealed the presence of a peri-umbilical lump and an empty right iliac fossa. Differential diagnosis of Intussusception, Cecal carcinoma, Mesenteric mass, Appendicular lump and Abdominal wall haematoma were made.

Evaluation by USG revealed telescoping of small intestine with a submucosal polyp at the apex. CT abdomen confirmed these findings. A diagnosis of ileo-ileal intussusception with a submucosal polyp was made. Patient was managed initially by putting Ryle's tube for decompression of stomach, urine catheterisation and providing IV fluids and antibiotics. Once optimised, he underwent an emergency midline laparotomy under general anaesthesia, with resection of intussusception involved bowel and polyp en block followed by an ileo-ileal primary anastomosis.

Resected specimen sent for histopathology examination confirmed the diagnosis and ruled out malignancy. When stabilised, patient was discharged on oral analgesics and antibiotics, and was advised to have light meals for the next 15 days.

Conclusion: This case exemplifies that intussusception albeit being rare, still profits from early diagnosis leading to enhanced surgical success and bowel preservation.

KEYWORDS: INTUSSUSCEPTION, TELESCOPING, SUBMUCOSAL POLYP, SURGICAL RESECTION

A CASE OF ADVANCED COLON CANCER IN COVID-19 TIMES

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Type: Case Report

Introduction: Since the COVID-19 pandemic outbreak, all aspects regarding cancer treatment have been affected. Studies have shown a decrease in the number of oncologic diagnoses by 30-40%, in just one year, but this was mainly due to patient's limited access to investigations and medical services for chronic conditions, as well as patient's fear and reluctance to address to hospitals in the current epidemiologic context.

Case Presentation: We report the case of a 50-year-old man who presented to our emergency department with an ulcerated subumbilical tumor that had developed over the last year and diffuse abdominal pain. A CT scan was performed and showed a 120/120/91mm tumoral formation, associating inguinal and mesenteric lymphadenopathy. Considering the patients altered general status, the size and the visibly advanced stage of the tumor, he is admitted to our service and emergency surgery is decided. An exploratory laparotomy is performed and reveals a large transverse colon tumor that invades the urinary bladder, the large curvature of the stomach and the abdominal wall. We proceed with an extended right hemicolectomy with partial resection of the bladder, stomach and abdominal wall, followed by a side-to-side ileo-transverse anastomosis and though the parietal defect is large, we manage to close the abdominal cavity. The postoperative evolution of the patient was favorable and he was discharged day 10 after surgery. The histopathological exam of the sample revealed a moderately differentiated adenocarcinoma, with clear resection margins and no lymphatic invasion.

Conclusion: The fear of going to the hospital in the actual pandemic conditions caused patients to postpone medical visits leading to more present complications and advanced cancer stages. Colorectal cancer is curable, if early diagnosed and timely treated, therefore screening and adequate case management are essential.

KEYWORDS: ADVANCED COLORECTAL CANCER; HEMICOLECTOMY; ADENOCARCINOMA; COVID19

A CASE OF PENILE CARCINOMA: IT'S ETIOPATHOGENESIS AND MANAGEMENT

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Type: Case Report

Introduction: Penile carcinoma, rather uncommon worldwide, has higher incidences in India with 0.7-2.3 cases/100,000 and 3 cases/100,000 in urban and rural areas respectively. The incidences peak at 60-70 years of age. Squamous cell histology accounts to approximately 95% of total cases. The patients usually present with phimosis, erythema, swelling and ulceration that may bleed. Incisional biopsy and MRI are preferred modalities to determine the type, extent and staging of carcinoma. Depending on the stage, partial or total penis removal with or without groin node dissection is performed.

Case Presentation: A 47-year-old gentleman, presented with complaints of redness, swelling and ulceration on glans penis, to the male surgery OPD of Sola Civil Hospital.

On clinical examination: Inspection: there was a single, small (1x1 cm), raised and erythematous ulcer present on the Type of glans penis. Penile growth was seen to be nodular, exophytic and cauliflower like.

Palpation: ulcer - Non tender, the edge and base were markedly indurated. Nodes - The inguinal lymph nodes were found to be enlarged.

Investigation: All radiological investigations showed neoplastic lesion. CT scan confirmed enlargement of lymph nodes. Routine blood investigations were normal. Furthermore, incisional biopsy showed squamous cell carcinoma of penis, and differentiated it from HPV infection, Buschke-Lowenstein tumor and pre-malignant lesions.

Management: The patient was counselled and explained about the procedure (Partial distal penis removal), consent was taken and medical fitness was assessed.

After optimizing the patient for spinal anesthesia, Partial Penectomy was done via Tennis Racquet (circumferential) incision along with prophylactic removal of bilateral inguinal lymph nodes.

Patient was explained about post-operative complications like lymphorrhea and wound infection and was referred to an onco-physician for further therapy.

Conclusion: Penile carcinoma is rare, but potentially curable, so early screening and diagnosis are essential. Penile sparing technique should be practiced where possible. Psychosocial support is important for post-operative quality of life.

KEYWORDS: PENILE CARCINOMA, SQUAMOUS CELL CARCINOMA, INDIA, BIOPSY, PARTIAL PENECTOMY

A CLOSED LOOP CLINICAL AUDIT ON SURGICAL DOCUMENTATION

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Type: Original research/Cohort study/Clinical study

Introduction: Good documentation is central to good clinical practice and is the foundation of a patient's medical record. It captures patient care from admission to discharge, including diagnosis, treatment, and resources used during their care. When the documentation is complete, detailed, and accurate, it prevents ambiguity and improves communication between healthcare providers. Information from records may provide medico-legal evidence for any claims made that require legal action and this can occur months or even years after the actual event, demanding a need for accuracy.

Materials & Methods: A total of 90 case files were studied and assessed in detail from all surgical departments. The audit was done for a period of 1 month at a tertiary hospital in India. The "STAR: Surgical tool for auditing records" tool was used to collect data accordingly. The results were then compared with standard guidelines and analyzed. A series of departmental training and implementation meetings were carried out. After 2 weeks, a re-audit was performed.

Results: The overall compliance score of the hospital was found to be 74%. While General surgery and orthopedics showed a higher rate of compliance, each constituting 82%, Neurosurgery showed the least compliance of 62%. It was also seen that the maximum percentage of missing information constituted of anesthetic records and subsequent entries. After the re-audit, a considerable improvement was observed, with the compliance rate improving to 90% in all departments.

Limitations:

1. Small sample size
2. The study was done during the pandemic

Conclusion: We believe that compliance and implementation of the STAR Score is mandatory, as it can significantly improve the quality of documentation and can be implemented universally.

KEYWORDS: SURGERY, SURGICAL DOCUMENTATION, CLINICAL AUDIT

A RARE CASE OF INTESTINAL TUBERCULOSIS OBSTRUCTION WITH CLOSTRIDIUM DIFFICILE COINFECTION

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Type: Case Report

Introduction: The purpose is to highlight a rare case with the presence of both intestinal obstruction due to tuberculosis and diarrhea caused by *Clostridium difficile* infection, to evaluate the role of surgery and to choose the best procedures in management of this disease.

Case Presentation: We present the case of a 65-year-old male who was admitted to the emergency room because of abdominal pain, diarrhea, nausea and fever. The medical history included pulmonary tuberculosis under treatment, *Clostridium difficile* infection, cachexia, encephalopathy, middle cerebral artery stroke, right hemiparesis, mixed transcortical aphasia, thoraco-abdominal hematoma, cholestasis, hepatomegaly, cytolysis syndrome, pericardial effusion, bradycardia and coagulation disorders. The laboratory tests showed anemia, hypoproteinemia, hyponatremia and hypochloremia. CT showed ileal conglomerate loops located at the hypogastric level, accompanied by long-axis rotation of the superior mesenteric vascular bundle and ileal enteral hydroaerial levels with moderate distension. The diagnosis was intestinal occlusion due to inflammatory ileal stenosis and adhesion syndrome.

The surgery consisted of exploratory laparotomy, adhesiolysis, ileal segmental resection with jejunoleal anastomosis L-L, evacuation of ascites. After that, lavage and suturing were performed and the wound was covered with a sterile dressing.

Conclusion: In conclusion, attention should be paid to tuberculosis-medication associated *Clostridium difficile* infections. Tuberculous bowel obstruction remains rampant and contributes significantly to high morbidity and mortality.

KEYWORDS: TUBERCULOSIS, BOWEL OBSTRUCTION, CLOSTRIDIUM DIFFICILE INFECTION

ANTERIOR SACRAL MENINGOCELE MISDIAGNOSED AS AN OVARIAN CYST

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Type: Case Report

Introduction: Anterior sacral meningocele is a rare form of ventral spinal dysraphism, characterized by protrusion of the meningeal sac through the defect in the anterior part of the sacrum. Common symptoms include constipation, urinary problems, lower back and pelvic pain and rarely neurological symptoms.

Case Presentation: A forty six year old female patient presented with mild urinary dysfunction and the feeling of pelvic pain and discomfort. The neurological examination showed mild hemiparesis due to polytrauma eight years ago. At gynecological examination, ultrasound examination was performed and she was misdiagnosed as having an ovarian cyst. Magnetic resonance imaging revealed a presacral mass, suggesting a cyst containing cerebrospinal fluid. All the diagnostic data suggested anterior sacral meningocele. The patient underwent sacral S1-S3 laminectomy and posterior exploration. Also, evoked potential monitoring and nerve identification was used to avoid postoperational neurological deficit. The patient postoperatively had good sphincter control with no change in the neurological examination and with total relief from the symptoms. No postoperative complications were observed. She was discharged on postoperative day 9 after suture removal.

Conclusion: Pelvic cystic and tumor masses are often misdiagnosed as ovarian cysts or tumors. The diagnosis of anterior sacral meningocele should always be considered in cases with atypical pelvic cysts, because if overlooked severe neurological complications can occur. Thus, MR imaging should be always used in such cases and it is a gold standard for the diagnosis of anterior sacral meningocele.

KEYWORDS: ANTERIOR SACRAL MENINGOCELE, OVARIAN CYST, MAGNETIC RESONANCE IMAGING

AORTIC REGURGITATION – BICUSPID AORTIC VALVE DISEASE ON A 22 YOUNG MALE

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Type: Case Report

Introduction: Bicuspid aortic valve disease (BVD) is a congenital heart disease. Patients with bicuspid (or tricuspid) dystrophic aortic insufficiency (AI) account for approximately two-thirds of the AI cases. A bicuspid aortic valve may cause structural heart modifications such as: aortic valve stenosis, aortic valve regurgitation and aortopathy. Most people with bicuspid aortic valve don't develop signs and symptoms until they are adults. Symptoms of a bicuspid aortic valve with severe valve disease include chest pain, shortness of breath and difficulty exercising.

Case Presentation: We report a case of a 22-year-old patient who was hospitalized for an episode of paroxysmal atrial fibrillation. During the hospitalization, an important aortic regurgitation caused by a dystrophic bicuspid aortic valve was discovered. The indication for surgery is supported by the presence of symptomatic effort dyspnea (NYHA 2).

The pre-operative transthoracic echocardiography examen showed a severe aortic insufficiency caused by a bicuspid valve type 1 (L\R) , a medium dilation of left ventricle (DTD 60 mm). However the left ventricular ejection fraction is not affected (55%).

The main procedure consisted in an aortic valve plasty and double annuloplasty ring for aortic valve stabilization. Also, a bilateral pulmonary vein isolation and left atrial appendage exclusion were performed.

Conclusion: The patient had a favourable evolution in spite of the issues caused by the necessity of reintervention due to a tear in the aortic valve plasty. The particularity of this case is that the aortic annuloplasty is considered an essential component of AV repair and valve-sparing root surgery (VSRS).

KEYWORDS: BICUSPID AORTIC VALVE, AORTIC VALVE SPARING, AORTIC VALVE REPAIR, AORTIC REGURGITATION, ANNULOPLASTY

BLEEDING RISK IN CARDIOVASCULAR INTERVENTIONS DUE TO SIDE EFFECTS OF NSAIDS – ARE THEY SAFE?

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Type: Review

Introduction: Bleeding risk in cardiovascular surgery is a feared complication in patient with platelet disorders including thrombocytopenia (TP) caused by an excess or long-term use of Nonsteroidal anti-inflammatory drugs (NSAIDs). Also, the excess is a cause of cardiovascular diseases and bleeding events which are strong prognostic factors for all-cause mortality.

Materials & Methods: We searched PubMed, NCBI and American College of Cardiology (ACC) databases from 2016 to 2020 and selected a number of 10 studies. Systematic searches were conducted to identify observational studies published in the last 4 years, reporting the NSAIDs effects on cardiovascular system (CV) and the risk of bleeding during surgery. Our research came to a total of three groups who were exposed to aspirin, metamizole and acetaminophen in short/ long-term administration.

Results: According to our analysis, the risk of developing drug-induced agranulocytosis & neutropenia after metamizole prescription was 1: 1602 (CI 95%, 1:1926 to 1:1371). In the metamizole cohort, agranulocytosis and neutropenia appeared more often than in the control cohort 2 given no metamizole. The second relevant study showed that aspirin consumption is associated with an increased risk of major bleeding events compared with no aspirin (23.1 per 10000 participant-years with aspirin and 16.4 per 10000 participant-years with no aspirin). Also, the use of a large quantity of an analgesic combination containing acetaminophen and other substances caused severe thrombocytopenia.

Conclusion: NSAIDs administration may increase the rate of bleeding during surgery and poses a high risk in cardiovascular diseases. Thus, NSAID should be used as prescribed, at the minimum effective dose, and on the very short term and the administration interrupted 1-2 weeks before surgery.

KEYWORDS: BLEEDING RISK, THROMBOCYTOPENIA, AGRANULOCYTOSIS, NEUTROPENIA, METAMIZOLE, ASPIRIN, ACETAMINOPHEN

CASE REPORT: HIGH-VELOCITY GUNSHOT WOUND - PANDORA'S BOX OF TRAUMATOLOGY

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Type: Case Report

Introduction: High-velocity gunshot wound in its nature is a grave injury as it is inflicted by a weapon designed to kill. A speeding bullet often causes cavitation, bone fractures and significant damage to surrounding soft tissue. These types of wounds are often hard to treat, as they usually require use of broad-spectrum antibiotics, multiple rounds of debridement and irrigation procedures, immobilization and delayed wound closure. In addition, a multidisciplinary team consisting of plastic and traumatology surgeons is necessary to ensure proper tissue and bone reconstruction.

Case Presentation: Patient is a 61 year-old male, presented to the emergency room due to a right thigh gunshot wound and severe pain (8 points according to Visual Analog Scale). As claimed by the patient he was shot with 9th caliber CZ 555 rifle mishandled by a fellow hunter. The trauma resulted in proximal entry and posterolateral exit lesions, which were 1X1 cm and 15X10 cm wide respectively. Furthermore, an X-ray revealed comminuted subtrochanteric (32C according to AO classification for femur fractures) and displaced oblique distal diaphysis fractures (32A). Bone damage was managed by cement filling and external fixation device. Cefazolin and metronidazole were given as a prophylaxis. Eight debridement operations were performed overall. Following infection, VAC ® (Vacuum-assisted closure) system was formed and antibiotics were changed to colistin.

Conclusion: High-velocity gunshot wounds are rare during peace-time. Hence, not enough individual treatment experience is accumulated. More attention should be paid to training traumatology surgeons to distinguish between viable and non-viable tissue. In order to reduce the number of debridement procedures excision of necrosis zone must be more radical. Delayed wound closure and antibiotics prophylaxis should remain common practice for these injuries.

KEYWORDS: GUNSHOT WOUND, DEBRIDEMENT, TRAUMATOLOGY

CHOROIDAL MALIGNANT MELANOMA – MODERN APPROACH OF TREATMENT

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Type: Case Report

Introduction: Uveal Melanoma (including Choroidal Melanoma) is the most common primary intraocular malignant tumor in adults. Depending on the tumor size, the treatment can address conservative techniques or the globe can be enucleated. Eye-preserving therapeutic options include: radiotherapy (brachytherapy and charged-particle therapy), phototherapy (photocoagulation, transpupillary thermal therapy and photodynamic therapy) and surgery (lamellar or full thickness resection procedures). The prognosis is often unfavorable due to the high tendency to metastasize.

Case presentation: A 62-year-old man presented to the Ophthalmology Department for reduced visual acuity of his left eye. As a result of the specific medical assessment, a pigmented tumor of probable choroidal origin was found to be present lower of the inferior temporal arcade. Complementary examinations (ocular ultrasound, optical coherence tomography) showed associated retinal detachment. The patient was accordingly referred to a center specialized in ocular oncology in Great Britain, where brachytherapy with Ruthenium-106 was practiced. The chosen interventional treatment was a conservative one (plaque brachytherapy), with favorable postoperative evolution. The patient was monitored ophthalmologically and oncologically for the next 3 years.

Conclusion: Choroidal Melanoma is a condition with an extremely severe life prognosis, but which, in the twenty-first century, can benefit from life-saving eye-sparing therapeutic solutions. Ruthenium-106 brachytherapy alone or used as adjuvant to surgical endoresection is an efficient eye-preserving treatment for the primary tumor in Choroidal Melanomas.

KEYWORDS: BRACHYTHERAPY, CHOROIDAL MELANOMA, ENDORESECTION, RUTHENIUM-106

COEXISTING BRAIN ANEURYSM AND MENINGIOMA IN A 62-YEAR-OLD FEMALE PATIENT

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Type: Case Report

Introduction: In the field of neurosurgery, meningiomas and cerebral aneurysms are prevalent diseases. Aneurysms affect 1 to 5% of the adult population, with meningiomas accounting for around 34% of all primary brain tumors. Despite the fact that they occur frequently, their co-occurrence in the same patient is quite rare. Meningiomas also have a tendency to impact the surrounding bone, resulting in hyperostosis in some cases. This is a case of atypical meningioma with several peritumoral aneurysms and fronto-basal hyperostosis coexisting.

Case Presentation: 62-year-old woman admitted with a sudden onset, developing headache, vomiting and right-sided motor impairment. She also reported losing consciousness and then falling on the same level.

Neurological examination: conscious, Glasgow coma scale of 11 points, right side hemiparesis, symmetrically miotic pupils. Frontal and temporal bone hyperostosis on the left side was observed.

Angio-CT scan reveals an anterior skull base hyperdense left clinoid meningioma, diffuse subarachnoid hemorrhage, and intraventricular hemorrhage. Aneurysms in the anterior cerebral artery branches (callosal-marginal and pericallosal arteries) were discovered next to the tumor. The aneurysm in the pericallosal artery calcified and ruptured, causing subacute cerebral hemorrhage. The scan also indicated that the bone tumor was separated from the lesion at the base of the skull.

The patient underwent a left frontotemporal craniotomy for aneurysm clipping and meningioma subtotal ablation. Resection of the hyperostotic area was also done, followed by cranioplasty with titanium mesh and acrylic bone cement.

Conclusion: Depending on the location of the lesions, the type of tumor, and the patient's comorbidities, the surgical approach to a coexisting brain tumor and cerebral aneurysm may differ. There are no clinical guidelines for the care and follow-up of individuals who have both of these illnesses at this time. Tumor ablation has been shown in several studies to impact the evolution of aneurysms, resulting in an increased risk of rupture.

KEYWORDS: MENINGIOMA, ANEURYSM, FRONTO-TEMPORAL HYPEROSTOSIS, BRAIN TUMOUR

COMPLEX TREATMENT FOR PLANTAR ULCER IN A CASE WITH DIABETES MELLITUS

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Type: Case Report

Introduction: Most inferior limb amputations are due to complications of diabetes mellitus. We present a case of a female patient with diabetes mellitus that arrived in our unit for a plantar ulcer corresponding to the 3rd metatarsal head that was unsuccessfully treated in two other units in the county side. The county hospital asked for a toe amputation that the patient refused.

Case Presentation: We applied active silver dressings and the ulcer closed in the next three weeks, but shortly after she developed an abscess on the dorsal side of the 3rd toe where she previously had two incisions performed in the county side hospital. We took samples that revealed staphylococcus aureus sensitive to most antibiotics, but the X-ray revealed a osteolysis of the 3rd metatarsal head. Patient also refused Singer procedure and we advised for angiography, cardiology evaluation for prostaglandin therapy.

Angiography revealed complete stenosis of all three major leg arteries except two communicating branches of fibular artery without any possibility of revascularization. Prostaglandin therapy was administered, custom made shoes after plantar sensor assessment led to healing and improvement of life conditions. Several superficial hematomas occurred in the same spot after excessive walk, that were treated conservatively.

Conclusion: Complex approach of a severe case of diabetic foot led to complete healing of the plantar ulcer despite high chances of amputation. Periodic evaluation of the foot and of custom made shoes improved the quality of life of our patient. Prostaglandin treatment along with custom made shoes and sonographic evaluation of plantar lesions and arterial blood supply are the key steps for successful treatment of diabetic foot.

KEYWORDS: DIABETES MELLITUS, PLANTAR ULCER, PROSTAGLANDIN, ANGIOGRAPHY

DEEP FEMORAL ARTERY ANEURYSM – A CASE REPORT

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Type: Case Report

Introduction: True femoral artery aneurysms represent a rare vascular pathology, accounting for less than 1% of all aneurysms and are associated with a high risk of thrombosis/occlusion, distal embolization or rupture.

Case Presentation: We present the case of a 69-year-old male, smoker, with a history of arterial hypertension and peripheral artery disease (Fontaine Classification stage III). He presents intermittent claudication since 2016, when he was diagnosed with a partially thrombosed deep femoral artery aneurysm (DFAA) emerging immediately after the bifurcation of the common femoral artery, that developed in 2019 to a completely thrombosed DFAA. In March 2021, he presented in the Emergency Department experiencing aggressive pains at rest, with no response to antalgic medication. The patient was referred to the Vascular Surgery Clinic, where an aneurysmectomy with reconstruction of the DFA with a Dacron vascular prosthesis was performed, in addition to an iliofemoral and femorotibial thrombectomy using the Fogarty catheter. The excised aneurysm was sent to pathology for further examination, which revealed several necrotic and hemorrhagic atherosclerotic plaques as well as a hyalinized parietal thrombus adherent to the intima. Before the end of the procedure, the patient developed compartment syndrome and a fasciotomy was performed. Several days later, the gastrocnemius muscle was partially resected due to the necrotic process that occurred as a result of the chronic ischemia the lower limb was exposed to.

Conclusion: The DFAA presented a slow, but complicated evolution in our case because of poor patient compliance, therefore we would like to point out the importance of an early diagnosis, as well as a proper treatment for this pathology, even though standard methods have not yet been established. CT angiography is an accurate method of examination, followed by surgical or endovascular treatment, depending on the dimensions of the aneurysm and the patient's comorbidities.

KEYWORDS: FEMORAL ARTERY ANEURYSM, DACRON VASCULAR PROSTHESIS, COMPARTMENT SYNDROME

DIAGNOSIS AND MANAGEMENT OF A KRUKENBERG TUMOR ORIGINATING OUTSIDE OF THE STOMACH

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Type: Case Report

Introduction: 37-year-old female patient, with an insignificant medical history, her mother's history includes gastric neoplasm, presents to the hospital with a progressively increasing diameter of her abdomen over the course of 6 months. A Krukenberg tumor refers to a rare (1-2% of ovarian cancers) malignancy in the ovary that metastasized from a primary site, classically the gastrointestinal tract, although it can arise in other tissues such as the breast. These tumors come to attention when the patient accuses of abdominal or pelvic pain, ascites, pain during intercourse.

Case Presentation: The presenting patient is a 37-year-old female, presenting to the hospital with a remarkably distended abdomen due to ascites over the course of 6 months. Other notable signs include edema of the inferior members and edema of the abdominal wall. Patient had a family history of gastric cancer on the maternal side. The differential diagnosis was established between nephrotic syndrome, liver cirrhosis and neoplasm. The results of the hemoleukogram, abdominal echography and the physical aspect of the patient excluded the first two mentioned possible diagnoses. Gastroscopy revealed a healthy-looking stomach, suggesting that the origin of the cancer is situated elsewhere in the gastro-intestinal tract. Surgical drainage of the ascites fluid followed by pathology and laboratory medicine analysis revealed a transudate that poses the suspicion for malignancy and a ROMA score of 46.28% (high risk of ovarian cancer of epithelial origin). After the drainage of over 25 L of ascites fluid, CT was possible and revealed 3 iodophilic cyst-like masses on the annexes, bilaterally, further suggesting malignancy.

Conclusion: The patient was sent home and instructed to drain 4-6 L of ascites fluid per day and then present to the hospital after a week. Patient will be referred to the oncology institute for further investigations.

KEYWORDS: KRUKENBERG TUMOR, ASCITES, ROMA SCORE, CT, OVARIAN CANCER

EFFICACY OF TOPICAL RECOMBINANT EPIDERMAL GROWTH FACTOR DRESSING IN THE MANAGEMENT OF CHRONIC NON-HEALING ULCERS AMONG DIABETICS

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Type: Original research/Cohort study/Clinical study

Introduction: The successful treatment of ulcers in diabetic individuals is the key to reduce the number of amputations. No dressing is a perfect model in the management of chronic ulcers as each type suffers its own disadvantages. The present study is to compare the efficacy of recombinant epidermal growth factor with conventional dressings among patients with chronic non-healing ulcers.

Materials & Methods: A randomised control trial was conducted in the tertiary Hospital, which is a comparative study between epidermal growth factor dressing and conventional dressing method among Diabetics with Chronic non-healing ulcers. A total of 120 patients were recruited in the study and were randomized into two groups by a sealed envelope method. Group I was given 5% Povidone-iodine, Group II was given Recombinant Epidermal Growth Factor (rhEGF). At this stage, the wound size was measured by cutting a gauge piece to the size of the wound, and the same was placed over the graph paper.

Results: A total of 120 patients were recruited. Mean age was 61.45 ± 8.07 years. Mean duration of diabetes was 9.47 ± 4.73 years. The mean ulcer size was 6.33 cm^2 (SD 6.473). The mean ulcer duration was 4.35 ± 1.38 years. Based on Wound swab cultures, 74 patients (61.7%), wound swab culture was sterile. In 42(35%) cases wound swab culture grown Staphylococcus, 2(1.7) patients had proteus and 2(1.7) patients had citrobacter. 10 (16.7%) patients on betadine dressing, and 48 (80%) patients on rhEGF dressing showed complete wound healing. The time taken for complete healing of wound with betadine dressing was 11.5 weeks (SD 1.00) and for rEGF dressing was 9.1 weeks (SD 2.42).

Limitations: Patients presenting with frank gangrene and radio logically proven osteomyelitis

Conclusion: We conclude that dressing with human epidermal growth factor is significantly effective compared to betadine. rhEGF has an excellent safety profile and easy to use.

GASTROENTEROPANCREATIC NEUROENDOCRINE TUMOR

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Type: Case Report

Introduction: A gastroenteropancreatic neuroendocrine tumor (GEP-NET) is a rare type of tumor that can grow in the pancreas or other areas of the gut, such as the stomach, small intestine, rectum, colon, or appendix. These types of tumors can appear at all ages, with the highest incidence being from the fifth decade onward. They are usually discovered during the preoperator superior gastrointestinal endoscopy (SGIE) for bariatric surgery.

Case Presentation: A 52-year-old woman presented for sleeve gastrectomy in March 2020. The preoperator SGIE suggested hyperemic and edematuous antral mucosa, with thickened folds (especially fundic and subcardial), where marbled appearance was found. Antrally, there were several protrusive formations, without changes in the mucosal color, which appeared with a truncated aspect and a small central excavation (suggesting a possibility of ectopic pancreas). A biopsy was performed. After 10 days postoperatively, an exploratory laparoscopy suggested the presence of several peritoneal nodules. The patient also did another SGIE which revealed a 20mm fornix tumor mass.

A CT scan was performed the following day. The result indicated gastric parietal thickening at the level of the fornix, with tumoral appearance, which affects the entire wall.

Six cycles of chemotherapy were recommended (from September 2020 till February 2021).

On April 2021 surgery was performed with the extraction of: transverse mesocolon, stomach, spleen, left adrenal gland, epiploon, right and left ovary, gallbladder. The histopathology exam showed a well differentiated neuroendocrine tumor (G2).

Conclusion: In conclusion, the particularities about this case are the unusual location of the tumor, the short time needed for the tumor to grow and the absence of symptoms.

HEMISPHERECTOMY: THE ULTIMATE TREATMENT FOR SEIZURES

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Type: Review

Introduction: Hemispherectomy is the surgical procedure in which half of the patient's brain is either completely or partially removed or separated from the remainder of the brain. It is a surgical technique used to treat epilepsy that is unresponsive to any medication, generally performed on youngsters.

Materials & Methods: This paper is based on 12 articles published on NCBI and PubMed since 2015 including reviews, meta-analyses and clinical cases. The most recent and relevant study that fits the chosen criteria, follows up the results from a research based on 70 cases and conducted between 2000 and 2018. The medical records of all consecutive children aged 5 and younger who received surgery for epileptic spasms at Cleveland Clinic were examined, post-operative seizure outcome and determinants of seizure outcome being also studied.

Results: The seizure result for hemispherectomy is favorable in patients with acquired lesions as well as those with congenital cortical abnormalities, with a seizure-free rate of 60–90 percent with substantial improvement happening in around 10–15 percent of patients. Anatomical hemispherectomy is an accurate approach for fully isolating the diseased hemisphere from the healthy hemisphere. Four similar aims are required to accomplish the same total separation with minimum problems: disconnection of the corticothalamic tract (internal disconnection of the internal capsule and corona radiata), excision of the medial temporal tissues, complete corpus callosotomy, and orbito-fronto-hypothalamic tract disconnection (disruption of the frontal horizontal fibers).

Conclusion: Although seizure reduction rates following hemispherectomy have ranged between 50% and 92% in several trials, with very low death rates, this medical treatment remains one of the most rare techniques used in surgery. As in every other procedure, this has its own major risks such as: brain swelling and damage to the healthy half of the brain. However, surgeons believe that hemispherectomy is the last option in treating drug-resistant epilepsy.

KEYWORDS: HEMISPHERECTOMY, DRUG-RESISTANT EPILEPSY, SEIZURES

INCARCERATED PROLAPSED BOWEL - AN EARLY COLOSTOMY COMPLICATION

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Type: Case Report

Introduction: Bowel obstruction, which can be either mechanical or functional, highlights an immediate surgical emergency. Mechanical obstructions, frequently caused by an intestinal tumor, are treated with a colostomy. A stoma ensures the normal bowel movement and evacuation using an ostomy pouching system. A colostomy, therefore, is an outstanding maneuver when treating mechanical obstructions. It is widely known that it can dramatically increase the patient's life quality, however, stoma related complications can have a profound impact. One such complication, found in only 2% of the cases, is the intestinal prolapse.

Case Presentation: We present a 64 year-old patient, who previously underwent a laparoscopic colostomy in continuity in another hospital, that was admitted to our hospital's emergency department with a prolapsed colon. Following the anamnestic interview, we find out that the initial intervention was performed due to a tumoral mass at the level of the colon, which caused intestinal obstruction, therefore leaving the proximal bowels in need of decompression. Two weeks after the colostomy, the mucosal layer of the intestinal wall protruded through the stoma and then incarcerated at the level of the abdominal wall orifice and colostomy bag, protrusion continuing to an extent of approximately 40-50 cm. Consequently, a new colostomy was carried out through a minimally invasive approach by doing a segmental sigmoid resection alongside a Volkmann colostomy, with favorable postoperative evolution.

Conclusion: Prolapse is a complication associated more with colostomies than with ileostomies, and is more frequent in patients with loop colostomy configuration rather than in those with end terminal type. Although it is life saving, this procedure associates certain complications, thus balancing the outcomes of different surgical interventions is an important part of the decision making process.

KEYWORDS: COLOSTOMY, PROLAPSE, LAPAROSCOPIC, BOWEL OBSTRUCTION

INFRATENTORIAL TUMOUR RESECTION WITH POST-OPERATIVE HEMATOMA

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Type: Case Report

Introduction: Infratentorial tumours are predominantly seen in children, and when occurring in adults are most commonly cerebellar metastases of lung and breast cancer. They are largely treated by surgical resection, of which the primary complication is postoperative hematoma (POH).

Case Presentation: A 60-year-old woman with a history of colon carcinoma without signs of dissemination presented to her oncologist complaining of vertigo. Other relevant conditions include arterial hypertension. She was referred to the neurology department and a CT scan and MRI were performed. A lesion was found in the right cerebellar hemisphere, suspected to be a metastasis. Upon complete chest CT, a lesion was also found in the right lung. Based on the findings, it was decided to first surgically resect the cerebellar metastasis, following which the finding on the right lung would be examined.

A craniotomy was performed and the metastasis in the right cerebellar hemisphere was resected. The operation was without complications and shortly after the operation the patient was transferred to the ICU to be kept under observation. CT scans of the brain post-operation were without signs of more serious surgical complications. On the second postoperative day, the patient's condition showed worsening in the morning presenting with vomiting, hypertension, and headache. An acute CT scan was performed showing a POH. This was a critical indication for reoperation to relieve pressure. The patient was taken for a second surgery immediately wherein the hematoma was evacuated, and an intracranial drain was inserted. The day after the reoperation the patient was stable, presented with a mild locus of pain and no paresis on any limbs.

Conclusion: This case illustrates an uncommon cerebellar metastasis complicated by POH underlining the value of rapid treatment. Recognition of the signs of POH and quick thinking are critical in administering the correct therapy and preventing further morbidity or mortality.

KEYWORDS: INFRATENTORIAL TUMOUR, CEREBELLAR METASTASIS, POSTOPERATIVE HEMATOMA, NEUROSURGERY, REOPERATION, SURGICAL COMPLICATIONS

LAPAROSCOPY-FIRST CHOICE FOR PERFORATED DUODENAL ULCER TOO?

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Type: Review

Introduction: The incidence of the perforated duodenal ulcer disease has decreased over the last years, but it is still among the emergencies that can lead to a fast patient decompensation when not treated properly.. Even though the gold standard for many surgical interventions is the laparoscopic approach, there are still many surgeons who choose the open one for emergencies. The aim of the review is to examine the effectiveness of laparoscopy in such situations.

Materials & Methods: The articles used for this systematic review were selected from Pubmed and the studies included were only the studies with perforated duodenal ulcer of the last 9 years. Most of the studies compared laparoscopy with the open approach, but some of them presented the results of only one type of surgery. In the first case, patients were included in the open or laparoscopy group depending on their preoperative condition, which was evaluated using the scores ASA (I-IV) and Boey (0-3). The patients who scored higher in these tests were selected for open surgery. There was one RCT, where severe cases were excluded.

Results: The studies showed that the operative time is generally longer for a laparoscopic intervention than for the open one. However, for experienced surgeons, the operative time can become even shorter in laparoscopy. Better outcomes for laparoscopic approach were discovered in terms of less postoperative complications (respiratory infections, wound infections, leakage rate), less analgic use, faster mobilisation of the patient and hospitalisation.

Conclusion: All articles conclude that the laparoscopic repair of the duodenal ulcer has shown its usefulness in emergency conditions for patients with a good preoperative status, increasing the chances of a quicker and less painful recovery. More specific studies should be made for patients in critical condition, to determine their availability for laparoscopy.

KEYWORDS: PERFORATED DUODENAL ULCER; LAPAROSCOPY

LEG AND FOREFOOT RECONSTRUCTION

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Type: Case Report

Introduction: Polytrauma is a term used to describe briefly severely injured patients whose one or more vital functions of the organism are endangered. This is a case of 6 years old child who is brought to the hospital with polytrauma after a car accident with a devastating plague on 1/3 of the left leg and forefoot.

Case Presentation: The paraclinical examinations, namely radiographs and abdominal and pelvic CT, revealed a right femoral shaft fracture and fracture of the left tibia and fibula. He presents a moderate anaemia and respiratory compensated metabolic acidosis. He was admitted to pediatric surgery and then to intensive care department. For the fractures is effectuated percutaneous osteosynthesis with rods. For the reconstruction of the 1/3 left leg and forefoot is used a rotation flap and the for the rest of the plague was used a skin graft. Before this it took place an excisional debridement of necrotic tissue. It was also used silicone expansion to create tunnels and avoid scar tissue for tendon reconstruction in a later type.

Conclusion: Clinical evolution was favorable, the patient being discharged after 28 days, the rotation flap providing a versatile technique that can be used in a number of situations to produce excellent functional and cosmetic outcomes. It is important that the use of a certain type of flap to be in accordance with the patient's injury and the doctor's abilities.

KEYWORDS: POLYTRAUMA, ROTATION FLAP

LOWER LIP DEFECT RECONSTRUCTION USING A TRANSORAL CROSS-LIP FLAP

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Type: Case Report

Introduction: Squamous cell carcinoma (SCC) is one of the most frequent forms of lip cancer, and if left untreated, can spread to the majority of the lip's surface, or even create a full thickness defect, leading to great tissue loss after resection. Labial function and aesthetics have been taken into account, leaving the optimal method of reconstruction at debate, with the Abbe flap being one of the most utilized and studied options.

Case Presentation: We're reporting a case of a 70-year-old Caucasian male who was admitted to the Plastic Surgery Clinic, exhibiting a erythematous plaque on the lower lip which has grown over time, covering approximately half of the vermillion's surface. Furthermore, patient history revealed that the patient has had a pack-year index of 67,5. Based on clinical examination and feature appearance, a diagnosis of SCC was made. Surgical resection is required - a W-shaped excision was performed, succeeded by histopathological assessment of the specimen. The presumptive diagnosis was confirmed following the examination . After excision, the Abbe flap was used to reconstruct the defect, leaving behind a cross-lip pedicle that was sectioned 20 days postoperative, by commissuroplasty. The flap is viable, with no signs of circulatory impairment or other complications, as seen at 6 month follow-up visit.

Conclusion: When facing full-thickness defects, or moderate to great tissue loss, this transoral cross-lip flap is a versatile solution, presenting low chance of necrosis due to complex vascular distribution, preserved lip function and high aesthetic value.

KEYWORDS: SQUAMOUS CELL CARCINOMA, ABBE FLAP, TRANSORAL CROSS-LIP FLAP, LOWER LIP DEFECT

MANAGEMENT OF A RARE CASE OF PSEUDOMYXOMA PERITONEI SECONDARY TO APPENDICEAL MUCINOUS MYXOMA IN A 64-YEAR-OLD FEMALE PATIENT

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Type: Case Report

Introduction: Pseudomyxoma peritonei (PMP) is a mucin or gelatinous ascites producing adenocarcinoma. They represent less than 0,5% of all gastrointestinal tract tumors. The most common cause of PMP is appendiceal primary cancer. If left untreated, the intraabdominal pressure caused by the ascites may destroy the functions of the stomach, small intestine, colon or any other abdominal organs, leading to lethal complications.

Case Presentation: We report the case of a 64-year-old female patient with a history of appendiceal cancer and PMP. Her condition was an incidental finding, after an exploratory laparoscopy performed on August 2020 for an ovarian mass. The biopsy results showed atypical mucinous epithelial cells and mucus-like material, suggesting the presence of a mucinous adenocarcinoma. The patient was admitted to the surgical unit on October 2020. A clinical exam was performed, revealing the distention of the abdomen, abdominal discomfort on palpation in the right iliac fossa and the right lumbar area. Preoperatively she was performed an abdominal ultrasound, a CT scan (showing a hepatic nodule, the distension of the appendix and the peritoneal cavity), a cardiological exam, a complete blood count and a basic metabolic panel (showing anemia and a cholestasis syndrome).

The surgery was carried out, consisting of an exploratory laparotomy, a tumoral debulking and a hyperthermic intraperitoneal chemotherapy (HIPEC). The postoperative outcome was favorable. The histopathological results showed a low-grade PMP, a low-grade appendicular mucinous mixoma, an endometrial polyp and an ovarian adenofibroma. During the follow-up period, the patient underwent chemotherapy, followed by an oncological reexamination. The patient gained 10 kilos during the following months.

Conclusion: This is a rare condition which requires a complex management, in order to avoid the risks of surgical shock. There is no common sense regarding the benefits of HIPEC versus early postoperative intraperitoneal chemotherapy (EIPEC), resulting in an increased importance of the the follow-up period.

MINIMALLY INVASIVE SURGERY FOR PARATHYROID ADENOMA - CASE PRESENTATION

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Type: Case Report

Introduction

Parathyroid adenoma is characterized by excess PTH secretion and is the main causative factor of primary hyperparathyroidism (PHPT). Overproduction of PTH results in hypercalcemia and hypophosphatemia. Although patients with PHPT have few dramatic symptoms, the most common ones are painful bones, kidney stones, and fatigue. Due to preoperative tests improvement, the treatment of choice for single gland removal is Open Minimally Invasive Parathyroidectomy (OMIP).

Case Presentation

We present the case of a 69-year-old female patient, with a history of PHPT, essential hypertension, osteoporosis, and hyperlipidemia, who was referred to our surgical service by her endocrinology physician for parathyroid adenoma. Imaging investigations localized a single tumoral formation at the level of the inferior part of the left thyroid lobe. Considering that the patient presented evident signs and symptoms of calcium and phosphorus altered metabolism, surgical intervention was indicated. An open minimally invasive parathyroidectomy (OMIP) was performed through a 2 cm incision on the medial margin of sternocleidomastoid muscle (SCM). The parathyroid gland is exposed through lateral retraction of SCM, medial retraction of infrahyoid muscles and thyroid lobe and after the ipsilateral recurrent laryngeal nerve is identified, we safely resect the encapsulated gland. Postoperative evolution was favorable, and the patient was discharged two days after the surgery. The histopathological exam of the surgical sample revealed a 0.8g homogenous, slightly irregular mass, with oxyphil and chief cells proliferation.

Conclusion

Surgical treatment of PHPT changed considerably in the past two decades. Technological progress of preoperative imaging techniques allowed a more targeted approach, therefore making minimally invasive surgery possible. Currently, OMIP is the “gold-standard” for solitary parathyroid adenoma resection; with only a 1.5-2 cm cervical incision, OMIP can also be performed under local anaesthesia and is not only safe, curative, but also a cost-effective, aesthetical surgery.

KEYWORDS: OMIP, PARATHYROID ADENOMA, PHPT

MODELING OF DISTAL HUMERUS OSTEOSARCOMA USING 3D PRINTING TECHNIQUES

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Type: Original research/Cohort study/Clinical study

Introduction: Among all bone malignancies, most frequent is osteosarcoma, which is more common among children. Distal humerus is a rare osteosarcoma location. It is usually treated by chemotherapy followed by amputation. Due to aggressive malignant features treating osteosarcoma is challenging. Nowadays 3D printing techniques are practiced more frequently in orthopedic oncological surgery by using radiological scans to establish precise resection of the tumor and limb replacement.

Materials & Methods: “Complete Anatomy 2021” was used to visualize anatomical structures. “Meshmixer” and “Sketchfab” were used to simulate and create model of prosthesis. Prototype of stage IB osteosarcoma for model creation was taken from “World Journal of Orthopedics”. 3D printer and material for printing was provided by Laboratory of the Institute of Anatomy and Anthropology at Rīga Stradiņš University. Anatomical structures were virtually dissected. Models were printed out. Measurements were made using caliper. Volume of osteosarcoma was calculated by using $V = (W(2) \times L) / 2$ formula, where V is tumor volume, W – width, L – length.

Results: In this study a case of distal humerus osteosarcoma was simulated. Two models of tumor affected and treated osteosarcoma were printed out using 3D printing techniques. Length of tumor was 6.08 cm, width 1.87 cm, depth 0.89 cm, volume 10.63 cm³.

Limitations: We cannot exclude, that in some patients’ body 3D printed prosthesis will not be rejected, which depends on individual reaction to foreign artificial material in the cubital region.

Conclusion:

1. Complications of damaging soft tissues, blood vessels and nerves of upper limb are expected in surgical treatment of distal humerus osteosarcoma.
2. Two 3D printed models were used to provide precise information regarding surgical procedure simulation before and after resection of the tumor.
3. 3D printing technologies can be used as an alternative method of surgically treating osteosarcoma, this procedure may benefit from preserving joint functions, an increasing surgical accuracy and lowering rate of tumor-related complications.

KEYWORDS: OSTEOSARCOMA, PROSTHESIS, DISTAL HUMERUS, 3D MODEL, ELBOW JOINT, ONCOLOGY, SURGERY

NON-FUNCTIONAL PANCREATIC NEUROENDOCRINE TUMOR WITH LIVER METASTASIS. CASE REPORT

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Type: Case Report

Introduction: Pancreatic neuroendocrine tumors (PNETs) are relatively uncommon, with an incidence per million of 4-10 patients. Non-functional PNETs are the ones not associated with exceeding hormonal titer or a distinct clinical syndrome.

Case Presentation: We present a patient, male, 31 year-old, non-significant medical history, complaining of epigastric pain, nausea. The clinical exam revealed a hard lump, possibly tumor, 10cm diameter, located in the upper right quadrant. Ultrasound: Non-alcoholic Fatty Liver Disease (NAFLD), 184mm maximum diameter; also, a heterogenous mass (131/66mm) with well-defined margins, substantial vascular supply, and possibly pertaining to left liver lobe. CT confirms Ultrasound findings and adds imaging diagnostic criteria for malignancy. At D4 level of duodenum, a solid, wall-pertaining, non-stenosing mass is identified. Classical approach unveils a firm tumor 12x12cm, attached to the diaphragmatic surface of segments II-III. Inframesocolic space inspection exposes, with subsequent removal, a 3x4cm encapsulated mass, next to duodeno-jejunal junction, on the inferior border of pancreas. Extemporaneous histopathological exam rises suspicion of PNET. Atypical hepatic resection is employed (segment II-III). Morphological appearance and immunohistochemical (IHC) profile correspond to lymph node and liver metastasis of well-differentiated G2 neuroendocrine tumor of pancreatic origin. IHC assay with synaptophysin and chromogranin showed intense positive reaction; Ki67 proliferation index of maximum 5%. The postoperative course was uneventful; the patient was directed to oncological service for individualized therapy. 5 months post-surgery, contrast-enhanced CT shows complete remission. Tumoral markers for PNET are negative. The patient is presented a treatment scheme with somatostatin.

Conclusion: Key features of this case are: patient's young age, elusive symptoms, and a hepatic tumor which proves to be a PNET metastasis. Primary tumor could not be identified in any CT prior to main surgery. In this case, classical surgical approach both with removal of the pancreatic tumor and atypical hepatic resection were justified, the patient evolution turning out favorable.

KEYWORDS: PANCREATIC NEUROENDOCRINE TUMOR, NON-FUNCTIONAL, LIVER METASTASIS, KI67

PERIORBITAL NECROTIZING FASCIITIS – A SERIOUS CONDITION WITH VITAL RISKS

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Type: Case Report

Introduction: Necrotizing fasciitis is a severe infection of the skin and the subcutaneous tissue with a significant rate of mortality. Characterized by a rapidly extensive soft tissue infection and necrosis along the superficial fascia and systemic toxicity, it can be classified into two subtypes: type I - polymicrobial infection and type II – group A streptococcus with or without staphylococcal infection.

Case Presentation: We present the case of a 67-year-old man, homeless, with psychiatric history, who suffers a multiple wound aggression in the cephalic extremity. He addresses to the ED with a general state of infection, showing significant edema of the left hemifacial, with esophageal and infraorbital lesions and subcutaneous emphysema. It extends from the scalp to the occipital region. The area of necrosis is about 10/7 cm. For diagnosis, LRINEC is used and it obtains a score of 9. The microbiological examination shows a type I necrosis of oculo-palpebral fasciitis. Considering the local appearance and the general condition of the patient, surgery is indicated. Under general anesthesia, necrectomy with enucleation of the left eyeball, fasciectomy and chemical toilet is practiced. Parieto-occipital necrectomy leaves the bone exposed. Treatment is continued with daily dressings under general anesthesia and antibiotic therapy. On the 5th postoperative day, it is surgically reintervened for the secondary suture and the coverage of the denuded bone and the orbit with a rotatable fascial flap and free split skin. The parieto-occipital fascial flap necrotized and led to another intervention which consisted in removing the periosteum and coverage with free split skin. The patient is discharged after 40 days of hospitalization.

Conclusion: The patient is discharged with a good general condition. Locally, the patient is completely cured and will need an ocular prosthesis. Necrotizing fasciitis is a rare, very aggressive pathology with high mortality potential, for which surgical treatment should be immediately established.

KEYWORDS: FASCIITIS, INFECTION, NECROSIS

PHANTOM LIMB PAIN AMONG THE AMPUTATED PATIENTS: A CORRELATION BETWEEN THE SURGICAL AND PSYCHIATRIC FIELD

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Type: Review

Introduction: The surgical removal of all or part of a limb or extremity is known as amputation. The most frequent type is amputation of the leg, either above or below the knee. In the United States in 2005, 1.6 million people (1 in 190) were living with limb loss. According to the research, phantom limb pain (PLP) affects 60 to 85 percent of amputee patients. PLP belongs to body schema disorders. Body schema may be defined as a set of mechanisms that registers the posture of one's body components in space. When moving, the schema is updated. This is a non-conscious mechanism that is primarily used for spatial organization of the body.

Materials & Methods: Fourteen published studies between 2013 and 2021 were reviewed. The phrases "amputation", "body schema" and "phantom limb pain" were used in a PubMed search to find the necessary information.

Results: Several chronic pain theories propose that both declarative and nondeclarative memory processes, via neuroplastic alterations in the nervous system, contribute to the formation and maintenance of chronic pain. Central sensitization is one example of this process, which refers to hyperexcitability of the central nervous system and accompanying decreased pain thresholds. There has been structural and functional rearrangement within pain-processing brain regions in various groups of chronic pain patients, which may indicate a neurological correlate of pain memory.

Conclusion: Although limb amputation is one of the most ancient medical operations, going back more than 2500 years to the time of Hippocrates, this surgical procedure still is a difficult procedure with countless effects on the patient's life. And since the cognitive variables on PLP are not completely known, more studies are necessary on this particular subject.

KEYWORDS: PHANTOM LIMP PAIN, AMPUTATION, PAIN MEMORY

ROBOTIC VS CLASSIC MITRAL VALVE REPAIR: THE ROUTINE PROCEDURE OF THE FUTURE

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Type: Review

Introduction: The second most common heart valve disease in the world, found in 4% of the normal population is mitral valve disease, the best considered surgical option being mitral valve repair (MVR). Robotic MVR is the least invasive surgical approach and an alternative to the traditional sternotomy. The aim of this article is to present the benefits and the cost compensation of the robotic MVR over the sternotomy approach.

Materials & Methods: This review includes 10 studies over the span of 6 years that were selected on the following basis: similarities of their hypotheses and analyzed outcomes. From these studies, 6 presents the costs balance between robotic MVR, while the other 4 compare the procedures themselves. One study assessed 30-day and 1-year outcomes of 328 consecutive patients undergoing robotic or sternotomy MVR. Echocardiographic follow-up was completed at one year in all robotic patients and detailed activity-based cost were showed. Another study was made on total of 1290 patient (robotically surgery was performed in 473 patients, complete sternotomy in 227) comparing the methods, the cost and follow-ups: robotic vs sternotomy.

Results: Studies suggested that the total costs of robotic MVR were similar to sternotomy (\$27,662 vs \$28,241 in the first study). Early direct cost are higher in robotic surgery, however they were partially offset by lower postoperative costs and earlier return to work (roughly 35 days for robotically surgery and 49 days for complete sternotomy). Also, an increase in late indirect cost with the sternotomy cohort was found, partially because of increased length of in-hospital stay, transfusion requirements (robotic MVR \$39 vs. \$74 sternotomy), and re-admission rates.

Conclusion: Robotic surgery for MVR offers the clinical benefit of the least invasive surgical treatment, lowest postoperative cost, and fastest return to work. In the future it is recommended that specialised centres should shift from the conventional to robotic approach.

KEYWORDS: MITRAL VALVE REPAIR, ROBOTIC SURGERY, STERNOTOMY

STEM CELLS IN PLASTIC SURGERY: THE MOST PROMISING THERAPEUTIC MODALITY?

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Type: Review

Introduction: Human stem cells are unspecialized cells that can be found throughout the body, in both embryonic and adult cells. Particular traits such as the power to differentiate into any cell of an organism and self-renewal, make them an appealing alternative for regenerative therapies of tissue abnormalities and cosmetic operations in plastic surgery.

Materials & Methods: A total of fourteen articles from 2013 to 2021 were examined. The phrases “stem cells in plastic and reconstructive surgery “ and “stem cells in cosmetic surgery” were used to perform a PubMed, NCBI and Google Scholar review, the search parameters limiting the papers to English-language articles. All the data includes the potential, as well as drawbacks, for incorporation of stem cells in cosmetic procedures.

Results: Over the years, stem cells specialization has been broken down into numerous stages, such as: unipotent, oligopotent, multipotent, pluripotent and totipotent, all these types of cells showing their versatility in differentiating, from lowest to highest. MSCs, as in mesenchymal stromal cells (multipotent stem cells) are of special therapeutic relevance because they can develop into bone, cartilage, muscle and fat. Scientists found a similar cell form in mature adipose tissue (ADSCs- adipose derived stem cells) that was easier to extract and produce, also having multilineage potential, most well-known application of ASCs being autologous fat transplantation by using a surgical technique, called cell aided lipotransfer (CAL) that isolates the stromal vascular fraction containing ADSCs from a portion of the aspirated fat and then recombines it with the remaining fat before injection.

Conclusion: Regardless, ADSCs have the potential to play a significant role in both regenerative medicine and aesthetic surgery. However there should be more study into identifying the risks of cell transplantation, the potential for tumor development, and the long-term consequences of these cells.

KEYWORDS: PLASTIC SURGERY, STEM CELLS, AUTOLOGOUS FAT TRANSPLANTATION, ASCS

SURGERY V/S BALLOON ANGIOPLASTY FOR TREATING COARCTATION OF AORTA: A META-ANALYSIS

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Type: Meta-analysis

Introduction: Coarctation of the aorta is a birth defect in which part of the aorta is narrower than usual. If the narrowing is severe or it remains undiagnosed, the baby will face serious health hazards in the absence of intervention. Treatment involves surgery or a procedure called balloon angioplasty, which is done during a cardiac catheterization. A balloon angioplasty uses a thin, flexible tube catheter inserted into a blood vessel and directed towards the aorta.

Materials & Methods: We conducted a database search of the MEDLINE, Embase and Cochrane Central Register of Controlled Trial and RCTs till 1st September 2020 were included following PRISMA guidelines after being matched with inclusion and exclusion criteria. 13 RCTs were included with 537 patients undergoing surgery and 340 patients undergoing balloon angioplasty. We used the MESH strings such as 'coarctation of aorta', 'surgery', 'balloon angioplasty', 'aneurysm'.

Results: Meta-analysis showed that surgery was associated with a significant increase in severe complications (OR = 1.993, 95% CI = 1.126–3.527, p=0.018). However, it was also associated with decrease in post-op aneurysm (OR = 0.32, 95% CI = 0.144–0.710, p=0.005) and re-coarctation (OR = 0.375, 95% CI = 0.268–0.524, p<0.001).

Conclusion: Although surgery results in an increased risk of severe complications, it also at the same time, reduces the incidences of post-op aneurysms and re-coarctations.

KEYWORDS: COARCTATION OF AORTA, SURGERY, BALLOON ANGIOPLASTY, ANEURYSM.

SURGICAL TREATMENT FOR PITUITARY GLAND DISORDERS ASSOCIATED WITH THE KISSING CAROTIDS OR AN ANEURYSM WITH INTRASELLAR EXTENTION

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Type: Review

Introduction: The “Kissing arteries” is a rare condition that refers to tortuous and elongated vessels that touch in the middle. Among the locations it may have, this review considered those located intrasellar, associated with pituitary pathology. In addition to this condition, the intrasellar aneurysm was also taken into consideration because both conditions can determine mechanical compression in this area. The significance of the kissing carotid arteries is justified by the role they play in the clinical manifestations of the pituitary pathology but also in its treatment.

Materials & Methods: We have analyzed case reports from Pubmed search engine using the following keywords: “kissing intrasellar carotid arteries” and “intrasellar aneurysm and treatment”. We included only case reports in which the localization of the kissing carotids and aneurysms were specific to sellar region. The search resulted in 22 relevant articles containing 23 cases published from 1971 to 2020.

Results: Out of all of the analysed cases (23), only 2 (8,6%) of them were related to the kissing arteries condition, compared to the other 20 cases (91,6%) that point to intrasellar aneurysm. Out of the cases that also presented an aneurysm, in 8 (38%) of them both the aneurysm and the associated pathology were treated, 6 (28,5%) were treated with medication, in 4 (19%) of them only the aneurysm was treated and in 2 (9,5%) of them only the associated pathology was surgically treated. Out of the 3 cases in which the transsphenoidal approach for pituitary disorders was mentioned, in two of them the aneurysm was operated beforehand.

Conclusion: The “Kissing carotids” and aneurysms, with extension in the intrasellar area have considerable implications in the pituitary gland pathology, representing a contraindication for transsphenoidal approach. Both may mimic intrasellar pathology such as pituitary adenoma or hypopituitarism and can be catastrophic if the condition is not discovered or reported before surgery.

KEYWORDS: KISSING CAROTIDS, INTRASELLAR ANEURYSM, TRANSSPHEOIDAL APPROACH, PITUITARY DISORDERS

THE HEARING OUTCOME: A CHALLENGE WHEN IT COMES TO MIDDLE EAR SURGERIES FOR CHOLESTEATOMA

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Type: Review

Introduction: Middle ear surgeries for chronic ears like in the case of patients suffering of cholesteatoma are some of the least consistent types of surgery when it comes to good hearing results. The interventions performed as treatment for cholesteatoma have evolved in the past 20 years in terms of lowering recurrence rates, decreasing the post-surgical inflammation and infections and improving the ability of comfortably wearing a hearing aid. The aim of this review is to present the changes observed in hearing outcome after canal wall-up bony obliteration technique (CWU-BOT) and canal wall-down bony obliteration technique (CWD-BOT) surgeries.

Materials & Methods: The articles included in this systematic review have been selected using the keywords CWU-BOT, CWD-BOT, hearing outcome, cholesteatoma from PubMed and Google scholar. The studies included both adults and children who were treated either by CWU-BOT or CWD-BOT. The main inclusion criterion was the existence of a follow-up period of at least 12 months where pure tone audiometry (PTA) was performed.

Results: The more recent studies preferred the CWU-BOT surgery as this approach keeps intact the posterior wall of the ear resulting into a self-cleaning, dry and water tolerant ear. In terms of hearing results, the studies presenting the CWU-BOT surgery mention an improvement in air conduction and an air-bone gap closure of 20dB. The older studies preferred the CWD-BOT approach especially in pediatric patients, but regarding the hearing outcome the studies showed mostly a preservation of the initial hearing and not actually a quantifiable improvement.

Conclusion: Through CWU-BOT surgery an ear with low recurrence rates and decreased residual levels can be achieved, but constant results of improved hearing outcome will remain a challenge for surgeons.

KEYWORDS: CHOLESTEATOMA, CWU-BOT, CWD-BOT, HEARING OUTCOME

THE IMPORTANCE OF VIGILANCE AND CONSISTENCY IN COLON CANCER TREATMENT

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Type: Case Report

Introduction: Adenocarcinoma of the colon represents a growing concern among gastroenterological malignancies, accounting for 98% of cancers of the large intestine. Although the majority of patients are elderly, it has also been observed in younger patients, in whose cases late presentation, low diagnosis suspicion and nonadherence to therapy lead to poor outcome.

Case Presentation: We present the case of a 33-year-old man complaining of intense abdominal pain. The clinical exam revealed the existence of an immobile, painful, steadily growing mass of 10 cm in the right iliac fossa. Based on the appearance of the lesion on the CT scan and colonoscopy, there was high suspicion of malignancy in the cecum, engulfing the ileocecal valve. An emergency right hemicolectomy with a latero-lateral ileotransverse anastomosis was performed. The pathology exam confirmed the existence of moderately differentiated adenocarcinoma. The patient had to undertake 8 cycles of adjuvant chemotherapy, but stopped after the first cycle due to severe side-effects. 4 months later, the patient returned with severe abdominal pain irradiating inguinally and in the right iliac fossa where he also presented a 20 cm mass. The CT scan showed the mass to be diffusely infiltrating the ileum, ascending colon and right iliacus muscle, as well as possible metastases in the right rectus abdominis muscle complicated by abscess formation. The patient underwent palliative R2 excision of the tumor in the right iliac fossa en bloc with the muscles of the right anterior abdominal wall and with multiple enteral loops, latero-lateral enteroenteral anastomosis as well as excision of the tumoral invasion in the sigmoid colon with transversal suture.

Conclusion: The aim of this case report is to highlight the importance of following thoroughly the course of treatment in oncological disease as well as addressing promptly any side-effects that it might have, therefore improving the disease-free survival.

KEYWORDS: COLORECTAL NEOPLASIA, RECURRENT TUMOR, ADENOCARCINOMA

THE SURGICAL OUTCOME OF AN IRREVERSIBLE ACUTE ISCHEMIA OF THE LOWER LIMB - CASE REPORT

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Type: Case Report

Introduction: The acute limb ischemia is a vascular emergency defined as a sudden decrease of perfusion in the limb, associated with the risk of loss of viability of the affected extremity. As the most common cause of acute ischemia, we can mention the atrial fibrillation. The absence of the anticoagulant therapy can lead to vascular embolization. The most important is the education of the patients on early recognize of the symptoms and then the early thrombectomy, until the tissue damages are reversible. The aim of this presentation is to highlight the importance of the early diagnosis and most of all the importance of the early revascularization of the limb in acute ischemia.

Case Presentation: We present a case of a 64 years-old female patient, who presented to the emergency room with acute lower limb ischemia, approximately in the last 9-10 hours. The patient also suffers of chronic ischemic cardiopathy, type 2 diabetes, atrial fibrillation, and right hemiplegia after stroke. In the moment of the presentation the patient has irreversible skin damages, without renal insufficiency. A Computed Tomography Angiography (CTA) detected the thromboembolic occlusion of the right arterial ax, with occlusion of the deep femoral artery. Despite the end stage acute ischemia of the lower limb, without any indication for revascularization the patient underwent an open surgical thrombectomy of the deep femoral artery before the limb amputation.

Conclusion: The early diagnosis and revascularization in acute ischemia are the patients lifeline. An untreated acute ischemia increase the morbidity and the mortality of these patients.

KEYWORDS: ACUTE ISCHEMIA, THROMBECTOMY, ANGIOGRAPHY, AMPUTATION, ATRIAL FIBRILLATION

THYROGLOSSAL DUCT CYST IN 60-YEAR OLD PATIENT- AN UNCOMMON OCCURENCE

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Type: Case Report

Introduction: Thyroglossal duct cyst (TDC) represents the second most common cause of congenital neck masses. During embryonic development of the thyroid gland, the thyroglossal duct is positioned between the anterior 2/3 and posterior 1/3 of the tongue; it usually atrophies, but can persist in approximately 7% of the population and form a TDC in the remnant duct. Though present at birth, it is usually only detected in later childhood, due to asymptomatic evolution.

Case Presentation: A 60-year-old, female patient, with a history of arterial hypertension, stroke, hypercholesteremia, and hyperuricemia, presented to our surgery department with a painless tumoral formation situated at the level of the anterior cervical region midline that moved with deglutition. Following anamnesis and clinical examination, a cervical CT scan was performed, which confirmed a 36mm diameter, polyseptal TDC. No additional lesions in the surrounding tissues were observed. Surgical excision (Sistrunk procedure) was performed, through an anterior transverse incision of 4-5cm; the cyst was carefully dissected from the surrounding structures up to the hyoid bone, and then removed in one piece along with the corresponding duct; the wound is closed with an intradermal suture. Postoperative evolution was favorable and the patient was discharged one day after surgery. The histopathological exam of the surgical specimen revealed complete excision, with no evidence of malignancy, but some peripheral ectopic thyroid tissue.

Conclusion: Even though thyroglossal duct cysts are a common diagnose in pediatric patients, they are quite rare in adults and exceptional in elderly patients. The reported incidence in literature is of approximately 0,6% in the 6th decade of life. Correct diagnosis and complete excision is much necessary in the elderly, since they have a higher risk of malignant transformation than other age groups.

KEYWORDS: THYROGLOSSAL DUCT CYST, ELDERLY, SISTRUNK PROCEDURE

TRANSANAL ENDORECTAL PULL-THROUGH FOR HIRSCHSPRUNG'S DISEASE IN INFANTS

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Type: Review

Introduction: Hirschsprung's disease (HD) represents one of the major causes of bowel obstruction seen in neonates and children. The aim of this review is to put in perspective based on a small selection of studies whether the transanal endorectal pull-through method (TERPT) is a highly beneficial single stage procedure whilst taking into consideration the postoperative complications.

Materials & Methods: We searched all publications in the PubMed, Journal of Pediatric Surgery, Annals of Pediatric Surgery and Journal of Surgical Sciences databases which allowed an organized approach of comparing the length of surgery and postoperative hospital stay and the incidence of postoperative complications in different studies conducted between 2002 and 2019. This review offers information about 413 neonates and children with an average age of 114.39 days as documented in most of the studies examined (5 papers have shown no record of age).

Results: The mean operative time was 162.9 minutes with an estimated average of 17.9 ml intraoperative blood loss. Hence, the lack of blood transfusion at neither of the surgeries. Oral feeding was resumed on the first six postoperative days as soon as the children were able to pass stools. Moreover, the mean hospital stay was 6.4 days. Despite the improved cosmesis of this procedure, the most common postoperative complication (18.15%) was perianal excoriation followed by postoperative enterocolitis with 9.44%. Furthermore, the presence of an anastomotic leak was observed in 7 patients, 6 of which developed an anastomotic stricture which required repeated dilatation.

Conclusion: TERPT as a minimal access approach is highly valued due to its uneventful postoperative course and low encounter of complications. Thus, permitting early discharge and oral feeding. The safe and minimally invasive character of this technique which allows rapid recovery makes it appealing for most pediatric surgeons when considering the treatment of HD in the case of infants and children.

KEYWORDS: HIRSCHSPRUNG; TRANSANAL; ENTEROCOLITIS; PULL-THROUGH; INFANTS

TREATMENT OF BLISTER-LIKE ANEURYSMS WITH A FLOW DIVERTER DEVICE

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Type: Case Report

Introduction: Blood blister-like aneurysms (BBAs) are rare, but significant as they often lead to high morbidity and mortality in patients. BBAs account for about 2% of all intracranial aneurysms, but are cause to approximately 2,2% of all subarachnoid hemorrhages (SAH). Underlying pathology is most often an ulcerated atherosclerotic plaque, covered with blister-shaped fibrous tissue. These tiny aneurysms are difficult to visualise on CT angiography, so are often missed. BBAs are challenging to treat as surgical clipping frequently results in rupture and tearing of ICA, which is often fatal, and classical endovascular methods like coiling are ineffective due to wide neck of the aneurysm. Here, we present two patients successfully treated by a relatively new approach in endovascular surgery, a flow diverter device (FDD).

Case Presentation: Both patients are middle aged women who presented with symptoms of SAH that resulted from spontaneous rupture of a BBA, one in anterior (ICA) and one in posterior circulation (superior cerebellar artery). After initial treatment in the ICU, a neurovascular council made a decision for them to be treated endovascularly. CT angiography was performed, but in patient with posterior circulation defect it failed to reveal site of the aneurysm. It was revealed by DSA in angiography and treated immediately by positioning FDD in distal basilar and proximal posterior cerebral artery. Patient with ICA defect was clinically much worse (Hunt Hess score 3, GCS 8) but successfully treated by FDD positioned from C2 to C4 segment of ICA. Both patients recovered fully.

Conclusion: For these two patients, treatment with FDD proved to be lifesaving and this brings promise to more successful treatment of BBAs, but also all wide-neck aneurysms.

KEYWORDS: BLOOD BLISTER-LIKE ANEURYSM, FLOW DIVERTER DEVICE, ENDOVASCULAR SURGERY

UNDERGOING A LIVER TRANSPLANTATION WITH A CO-EXISTING PORTAL VEIN THROMBOSIS

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Type: Case Report

Introduction: Portal vein thrombosis is a frequent complication seen in patients with liver cirrhosis, coming up with an estimated incidence rate of 10-26% in patients waiting for a liver transplantation. For decades, Portal vein thrombosis was said to be a relative contraindication for someone with liver cirrhosis, to be added in the transplant waiting list.

Case Presentation: A 44 year-old female patient, was diagnosed in 2016 with liver cirrhosis secondary to Wilson's disease. The patient was undergoing treatment with D-penicillamine. In January of 2019, she was admitted with a new onset of ascites and abdominal pain. Furthermore, a CT-scan revealed an acute non-malignant Portal Vein (PV) thrombosis, Yerdel classification: Grade 2. The doctor prescribed low-molecular weight heparin (Enoxaparine 0.6 ml bid for 3 months). Simultaneously, the patient was put in the liver transplant waiting list. In April 2019, a follow-up CT-scan showed, partial PV thrombosis, Yerdel classification: Grade 1. The patient continued the above mentioned medications. In November 2019, the patient received a liver from a brain-dead donor. When the new liver was placed, the first anastomosis was performed to establish bloodflow between the liver and Inferior Vena Cava. Then, the vascular forcep on the IVC was removed after completing the anastomosis, allowing retrograde re-perfusion while the PV anastomosis was planned. Afterwards, the surgeons identified the position of the PV thrombus and performed a thrombectomy. Then, they carried out an end-to-end PV anastomosis between the existing portal vein and the PV from the new liver. The surgeons continued with an end-to-side anastomosis between PV and left gastric vein. Finally, the operation continued normally without any later complications.

Conclusion: Nowadays, portal vein thrombosis is not a contraindication for a liver transplantation. Indeed, it makes the operation more complicated and requires a well prepared surgical team. However, it remains a manageable complication, with a good prognosis.

KEYWORDS: LIVER TRANSPLANTATION, PORTAL VEIN THROMBOSIS

VIDEO-ASSISTED THORACOSCOPIC SURGERY UNVEILS A BRANCHED RIGHT HORN THYMUS. CASE REPORT.

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Type: Case Report

Introduction: Myasthenia gravis (MG) is the most common neuromuscular junction disorder, often caused by antibodies against components of the postsynaptic muscle membrane. Anti-acetylcholine receptor (AChR) antibodies are detected in serum of 85% of patients. Anti-AchR titer trend indicates the course of disease. The absolute indication for thymectomy is thymoma, tumor found in 15% of MG patients. Several approaches have been used for extended thymectomy (transcervical-transsternal, extended transsternal), video-assisted thoracoscopic surgery (VATS) being currently the most used minimally invasive technique.

Case Presentation: 61-year-old woman presented with mild myasthenic symptoms; major complaints were selective dysphagia for solids and left eyelid ptosis. The clinical exam revealed minimal slurred speech, result of advanced lower jaw disfunction, head drop due to neck extensor weakness, and mild generalized limb muscles weakness, worsened at the end of the day; MG class IIb degree. CT scan revealed a 30 mm diameter mass, with well-defined margins, located in the anterior mediastinum, highly suggestive for thymoma in clinical context; anti-AchR titer exceeded the accepted normal range. Spirometry showed a slightly reduced peak expiratory flow, 75% of predicted. Right-sided (classical) triple port VATS was the technique employed; postoperative course was uneventful, spontaneous breathing being achieved immediately after the surgical act. Aside from pain management and the preexisting hypertension treatment, she received Methylprednisolone and Neostigmine. At discharge, pharmacological recommendations consisting of the same cardiovascular scheme, and Neostigmine intravenous, if needed.

Conclusion: The thymus specimen, along with the surrounding fatty tissue removed, turned to be 20x14 cm; anatomical pathology revealed a 3x1.5x2 cm encapsulated nodule. Cervical horns extended 10 cm deep into the cervical region, alongside the great vessels, the right horn being a duplicate specimen. The patient left hospital 72 hours post-surgery, with only 3 minimal scars. This comes to emphasize the need for less and less invasive procedures, which bring benefit both to patients and the hospital.

KEYWORDS: MYASTHENIA GRAVIS, THYMECTOMY, THYMOMA, VIDEO-ASSISTED THORACOSCOPIC SURGERY, ACH-RECEPTOR ANTIBODY

