Vilnius Surgical Symposium

for Medical Students

SHAPING THE FUTURE OF SURGERY

ABSTRACT BOOK

11-12TH APRIL, 2025
VILNIUS, LITHUANIA

Vilnius Surgical Symposium

for Medical Students

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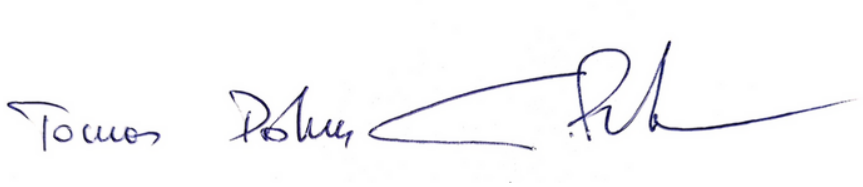
Dear friends, colleagues, ladies and gentlemen,

It is an honour to welcome you for the third time to Vilnius Surgical symposium for medical students.

Each of you have committed time and effort to learn more about surgery, and for that you are already rewarded - you will be better doctors, and, hopefully all of you - better surgeons.

Have a great time at the congress and around it - in Vilnius!

Sincerely,
Prof. Tomas Poškus



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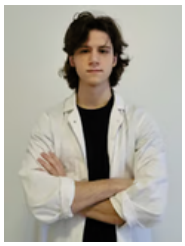

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SESSION A

Rebuilding Lives - Exploring Trauma, Orthopedics, and Plastic Surgery

Jury members:

- **Igoris Šatkauskas**
- **Rokas Bobina**
- **Donatas Stauskis**
- **Agnius Stulpinas**
- **Kastytis Grigonis**

Speakers:

1. **Rokas Venclovas, Justina Baltrūnaitė**, Vilnius, Lithuania
2. **Marija Sarafinaitė, Ieva Žemkauskaitė**, Vilnius, Lithuania
3. **Žiga Godicelj, Jure Kastelic,** Maribor, Slovenia
4. **Domas Drazdauskas,** Vilnius, Lithuania
5. **Karolina Volodzkaitė,** Kaunas, Lithuania
6. **Ieva Rogačiūtė**, Kaunas, Lithuania

ANKLE ARTHRODESIS AND TOTAL ARTHROPLASTY OUTCOMES IN ANKLE OSTEOARTHRITIS: A COMPARITIVE RETROSEPCTIVE STUDY

Author: Rokas Venclovas[1], 6th year, Justina Baltrūnaitė[3], 6th year
Supervisor: Aleksas Makulavičius[1,2], MD., PhD
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*Department of Traumatology and Orthopaedics, Republican Vilnius University Hospital, Vilnius, Lithuania*
[3]*Faculty of Medicine, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania*

Background and aim of the study. Ankle osteoarthritis is increasingly prevalent, affecting approximately 1% of the global population, with an estimated incidence of 30 cases per 100,000 inhabitants. Its progression is driven by aging, sports injuries, and post-traumatic joint degeneration. This study aims to compare treatment options, ankle arthrodesis (AA) and total ankle arthroplasty (TAA), by evaluating patients' pre- and post-operative function and pain parameters.

Methods and materials. This retrospective study included 26 patients with ankle osteoarthritis who underwent surgical treatment at Vilnius Republican University Hospital between 2013 and 2021. Patients received one of two surgical interventions—AA or TAA. On average, 6.2 years postoperatively (±1.7 years), patients were interviewed regarding their pre- and post-operative ankle function and pain levels using the AOFAS, SEFAS, and VAS scoring systems. The patients were categorized into three groups: post-AA, post-TAA, and complicated post-TAA. The Kruskal-Wallis test was used to assess the statistical significance of the results.

Results. A statistically significant difference was observed in favor of AA when comparing complicated TAA patients with AA patients for the following post-operative scores: SEFAS ($p = 0.02$), AOFAS pain ($p = 0.008$), and VAS ($p = 0.005$). Additionally, when comparing TAA and AA, a significant difference was found in the AOFAS pain post-operative scores ($p = 0.02$), again favoring AA.

Conclusions. In the short-term post-operative period (mean 3.5 years post-op), patients undergoing AA generally experience greater pain relief compared to those who undergo TAA (mean 8.3 years post-op). This is likely because AA effectively eliminates the primary source of pain by "shutting down" the osteoarthritis-affected joint. However, long-term studies (8+ years) indicate that TAA may provide better overall outcomes, as AA patients tend to develop stress- related pain and functional decline in the adjacent subtalar and talonavicular joints.

Keywords. Ankle osteoarthritis; Ankle arthrodesis, Total ankle arthroplasty; Outcomes.

ANTIBIOTIC CEMENT-COATED NAILS FOR INFECTED NON-UNIONS: A ROTTEN LONG BONE SAVING OPERATION

Author: Marija Sarafinaite[1], 4th year; Ieva Zemkauskaite[1], 4th year.
Supervisor: Jaunius Kurtinaitis[2], Assoc. Prof.
[1]*Vilnius University, Vilnius, Lithuania*
[2]*Republican Vilnius University Hospital, Vilnius, Lithuania*

Background and aim of the study. Infection remains a significant complication in orthopedic surgery, with post-surgical implant- related issues affecting up to 20% of patients. Infections after long bone fracture fixation are particularly challenging due to bacterial adherence and biofilm formation. This study aims to evaluate the efficacy of antibiotic-infused cement-coated intramedullary nails in managing fixation-related infections in long bones.

Methods and materials. A retrospective analysis of 10 cases involving patients with long bone fractures who underwent fixation and subsequent reoperation using antibiotic cement-coated nails (gentamicin, vancomycin, and/or meropenem) was conducted. Data from the hospital's electronic database were analyzed, focusing on injury site, pus formation, bone union, number of surgeries, infecting pathogens, comorbidities, antibiotic types, and follow-up duration.

Results. All 10 patients underwent internal fixation, experienced complications, and were reoperated using antibiotic-cement coated nails. Nine patients had lower extremity injuries (7 femur, 2 tibia), and one had an infected humerus. Three patients presented with healed fractures and concomitant osteomyelitis, while seven had non-unions. The mean follow-up duration was 11.2 months. Staphylococcus aureus and Klebsiella pneumoniae were the most frequently isolated pathogens. Vancomycin was the most commonly used antibiotic within the cement (60%). All patients achieved full recovery without requiring further infection-related treatments.

Conclusions. This case series analysis demonstrates that antibiotic cement-coated intramedullary nails are an effective treatment modality for post-fracture fixation-related infections. This approach should be considered a potential alternative to external fixation devices.

Keywords. Long Bone Fractures, Reoperation, Bone Infection Management, Antibiotic- Impregnated Nails, Cement-Coated Intramedullary Nails

MID-TERM ANALYSIS OF THE SURVIVAL OF UNCEMENTED TOTAL KNEE ARTHROPLASTIES WITH MODULAR TIBIAL COMPONENTS MADE OF POROUS TANTALUM

Author: Žiga Godicelj[1], 5th year, Jure Kastelic[1], 6 th year
Supervisor: Samo Karel Fokter[1,2], M.D, PhD, Assoc. Prof
[1]*University of Maribor, Faculty of Medicine, Maribor, Slovenia*
[2]*University Medical Centre Maribor, Department of Orthopaedics, Maribor, Slovenia*

Background and aim of the study. Cementless total knee arthroplasties (TKAs) with porous tantalum tibia components were developed to improve fixation and reduce implant failure rates, particularly in younger and more active patients. However, clinical outcomes remain unclear, with concerns regarding mid-term survival and complications. This retrospective study aimed to compare the survival rates of cementless TKAs with porous tantalum posterior-stabilized (PS) and cruciate retaining (CR) modular tibia components to those with cemented PS and CR tibia components, using revision for aseptic loosening as the endpoint.

Methods and materials. From January 2017 to December 2021, 1,202 TKAs were performed at a single tertiary institution. The majority of patients underwent TKA for primary osteoarthritis (OA). Of the total cohort, 826 cases (68.7%) involved cemented TKAs, while 376 cases (31.3%) involved cementless TKAs. However, patients treated with cementless TKAs were younger (mean age 64.4 years, 95%CI 63.6-65.2) than those with cemented TKAs (mean age 70.6 years, 95%CI 70.1-71.2) and were predominantly male (59%), while the cemented group had a higher proportion of female patients (74.2%). The cohort was followed until December 31, 2023.

Results. During the follow-up period, 113 patients died from causes unrelated to their TKA. The 7-year survival rate for all causes was lower in the cementless TKA group (98.3%, 95%CI 96.9- 99.7) compared to the cemented TKA group (99.7%, 95%CI 99.3-100). Revisions for aseptic loosening were exclusively due to tibia component loosening, with 2 revisions in the cemented group compared to 6 in the cementless group (p<0.05). Notably, 2 of the 6 cementless TKAs revised for tibia component loosening also exhibited fractured tibia trays.

Conclusions. Cementless porous tantalum PS and CR modular TKAs demonstrated inferior performance compared to their cemented counterparts. These findings are clinically significant, leading our institution to discontinue the use of this type of cementless implant.

Keywords. Knee; Arthroplasty; Prosthetic Failure; Aseptic Loosening; Revision Surgery.

VARUS DEFORMATION OF THE FEMORAL STEM IN HIP ARTHROPLASTY: ANATOMICAL AND SURGICAL RISK FACTORS

Author: Domas Drazdauskas[1], 4th year
Supervisor: Giedrius Kvedaras[2], M.D., PhD.
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*Center of Traumatology and Orthopaedics, Vilnius university Santaros clinics, Vilnius, Lithuania*

Background and aim of the study. Malignment of the femoral stem axis during hip arthroplasty is a common undesirable outcome of the procedure. In the frontal plane, the most common malalignment is the varus position of the stem. Although the clinical consequences of the femoral stem varus position are unclear, deformation leads to long-term prosthesis subsidence and altered biomechanical loading, which may affect the longevity of the prosthesis. This study aimed to evaluate the anatomical and operative risk factors associated with femoral stem deformity in the frontal plane after primary cemented hip arthroplasty.

Methods and materials. A retrospective analysis of patients undergoing hip arthroplasty at VUL Santaros Clinics was performed. Preoperative X-rays of patients were used to assess the anatomy of the hip, specifically measuring the femoral neck angle and the height of the greater tuberosity above the femoral head. Choice of surgical approach was also evaluated – patients were operated through a lateral or posterior incision. Statistical analysis was performed to determine how these factors correlate with the axis of the femoral stem in the frontal plane.

Results. Statistical analysis revealed no significant difference in the femoral stem alignment between the surgical approaches (lateral vs. posterior). However, a low femoral neck angle, indicating varus hip anatomy, correlated with an increased incidence of varus malalignment of the stem (Pearson's coefficient = -0.426, $p = 0.005$). Also, the varus deformity of the prosthesis was correlated with a higher height of the greater tuberosity above the centre of the femoral head (Pearson correlation coefficient = 0.343, $p = 0.028$).

Conclusions. To reduce the risk of postoperative hip prosthesis varus malalignment, it is important to assess the patient's preoperative hip anatomy. Also, the axis of the prosthetic stem depends on the type of implant and bone morphology but is independent of the choice of operative approach.

Keywords. Hip; arthroplasty; varus malalignment.

COMPARATIVE OUTCOMES OF VARIOUS BREAST REDUCTION TECHNIQUES

Author: Karolina Volodzkaitė[1], 6th year
Supervisor: Tautrimas Aštrauskas[2], M.D.
[1]*Faculty of Medicine, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*Plastic and reconstructive surgeon, Tautrimas Aštrauskas Clinic, Kaunas, Lithuania*

Background and aim of the study. Reduction mammaplasty, or breast reduction, is an increasingly prospering surgery developed to alleviate physical discomfort caused by disproportionately large breasts. Numerous approaches involving different pedicles and their combinations have been described in the literature, though there is no unanimous agreement on the superiority of a single technique. This study aims to evaluate the incidence of complications by comparing four methods applicable in breast reduction surgeries: superior, medial, inferior pedicles, and McKissock's technique.

Methods and materials. A retrospective study evaluated the results of patients who underwent reduction mammaplasty at Tautrimas Aštrauskas Clinic between the years 2000 and 2022. Patient characteristics, preoperative measurements, and surgical outcomes were compared between the four methods.

Results. In total, reduction mammaplasty was performed on 3978 breasts. The McKissock technique demonstrated significant advantages, including the preservation of nipple sensitivity in 90% of cases, with no incidents of nipple necrosis, and required less time to perform compared to other methods. Although the medial pedicle approach was characterized by a low incidence of reoperation or corrective procedures, it resulted in the highest number of partial nipple necrosis and liponecrosis cases with only a 30% success rate in preserving nipple sensation. The superior pedicle approach exhibited the lowest frequency of hematoma formation, as well as reduced rates of hypertrophic scarring and wound dehiscence, however, it required the longest amount of time to complete. The inferior pedicle technique, while showing a low incidence of hypertrophic scarring, displayed the highest rate of hematoma formation.

Conclusions. The study of breast reduction techniques revealed a relatively low complication rate among all methods; however, each approach had some advantages and limitations associated with each approach. The cardinal variation was found in nipple sensitivity preservation, ranging from 30% to 90%.

Keywords. Breast reduction; reduction mammaplasty; pedicles; complications.

BREASTFEEDING AFTER REDUCTION MAMMOPLASTY FOR AESTHETIC REASONS: A SYSTEMATIC REVIEW OF THE LAST DECADE

Author: Ieva Rogačiūtė[1], 6th year
Supervisor: Daiva Čepulienė[2], M.D. PhD
[1]*Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*Lithuanian University of Health Sciences Kauno Klinikos, Kaunas, Lithuania*

Background and aim of the study. Reduction mammoplasty is often described as improving the quality of life for those who experience chronic pain, physical impairment and self-consciousness associated with macromastia, however, it has downsides as well. Most of the complications after breast reduction surgery are minor, but one of the irreversible disadvantages is an inability to breastfeed, which must be discussed with patients of childbearing age as they might consider delaying the surgery. We will discuss the literature on the prevalence of breastfeeding success after reduction mammoplasty performed for aesthetic reasons.

Methods and materials. A literature search was conducted using the following keywords: "breastfeeding after reduction mammoplasty", "breastfeeding after breast reduction surgery" in the databases Pubmed and ScienceDirect. The articles from the last 10 years were read and reviewed.

Results. Breastfeeding success rates vary from 29 to 99.25 % in different data. Inability to breastfeed slightly varied between different surgical techniques – a study of 397 patients after reduction mammoplasty with the superolateral pedicle reported inability to breastfeed in 3 patients (0.75 %). Another study reviewed three different surgical techniques: superior pedicle – breastfeeding success rate was found to be 33 %; superomedial pedicle – 40 % of patients had the ability to breastfeed after the surgery and postero-superomedial pedicle – 29 % of patients had preserved an ability to lactate. A multicenter study of 303 patients after superomedial reduction mammoplasty found that 18 out of 37 women (48.64 %) were able to breastfeed after the surgery, compared to 241 out of 266 (90.60 %) before the surgery.

Conlusions. Although reduction mammoplasties improves the quality of life for patients suffering from macromastia, it's important to consider the possibility of losing lactation abilities and inform the patient prior surgery. It is also important to acknowledge that superolateral pedicle may be safest option to preserve lactation ability.

Keywords. Breastfeeding; reduction mammoplasty; breast reduction surgery.

SESSION B

Core Surgical Breakthroughs: Focus on General and Abdominal Surgery

Jury members:

- **Rokas Račkauskas**
- **Jonas Jurgaitis**
- **Algimantas Tamelis**
- **Audrius Dulskas**
- **Giuseppe Sica**

Speakers:

1. **Jakub Rochoń**, Warsaw, Poland.
2. **Andrius Gudauskas, Augustas Poškus**, Vilnius, Lithuania
3. **Monika Vaičiūtė**, Kaunas, Lithuania
4. **Ugnė Šilinskaitė**, Vilnius, Lithuania
5. **Jakub Łomzik, Wiktoria Kozłowska, Paulina Hnatuśko, Laura Bursztynowicz**, Bialystok, Poland
6. **Julija Garnytė, Monika Vaičiūtė**, Kaunas, Lithuania
7. **Milvydė Marija Tamutytė**, **Beatričė Kuzminaitė,** Vilnius, Lithuania
8. **Jakub Rochoń**, Warsaw, Poland

Vilnius Surgical Symposium for Medical Students

ULTRASOUND PERCUTANEOUS TRANSHEPATIC APPROACH – ORIGINAL RESEARCH

Author: Jakub Rochoń[1], 5th year
Supervisor: Arkadiusz Kowalczyk[1,2], MD
[1]*Department of Descriptive and Clinical Anatomy, Center for Biostructure Research, Medical University of Warsaw, Warsaw, Poland*
[2]*Pediatric Surgery and Urology Ward with Burn Unit, Bogdanowicz Pediatric Hospital, Warsaw, Poland*

Background and aim of the study. The femoral and internal jugular veins are the current standard insertion sites in intravascular procedures. However, in cases of occlusion, agenesis, or other obstruction of these veins, transhepatic accesses can be a safe and effective therapeutic option. There is still insufficient awareness of the potential use of percutaneous transhepatic intravascular access during cardiovascular interventions. This study aimed to evaluate the anatomy of the hepatic and portal veins, verify literature descriptions of percutaneous accesses to the hepatic veins, and explore alternative transhepatic vascular approaches.

Methods and materials. We recruited 100 healthy volunteers who underwent sonographic evaluation of their hepatic and portal vein anatomy. The percutaneous transhepatic vascular access was assessed according to cardiological guidelines. Additionally, new potential access points to the hepatic and portal veins were evaluated.

Results. Identification of hepatic veins and portal vein was successful in every examination. Previously described access points for transhepatic approach allow to gain access to different hepatic veins with questionable reliability. When using sonography to find optimal puncture site for gaining access to hepatic or portal vein success rate appears to be much higher. The transhepatic intravascular access to MHV in 7 th intercostal space, at midclavicular line, with transducer at 60 degrees and RHV in 9 th intercostal space in posterior axillary line at 60 degrees angle seem to be new potential solutions for intravascular interventions.

Conclusions. Obtaining percutaneous hepatic vessel access using US-examination seems to be more effective than following previously described topography. During search for intravascular access the course of the vessel and the angle of needle placement should be the main focus, not the vascular diameter. In our opinion using sonography for assessment of hepatic vessels for transhepatic intervention may reduce the risk of complications during procedure.

Keywords. Hepatic veins; Cardiac catheters; Ultrasonography, Interventional Radiology, Liver transplantation.

DELAYED DIAGNOSIS OF APPENDICEAL ENDOMETRIOSIS PRESENTING AS RECURRENT ABDOMINAL PAIN: A CASE REPORT

Author: Andrius Gudauskas[1], 3rd year, Augustas Poškus[1], 3rd year
Supervisor: Matas Jakubauskas[2], M.D., PhD
[1]*Faculty of Medicine, Vilnius University*
[2]*Vilnius University Hospital Santaros Klinikos, Clinic of Gastroenterology, Nephrourology and Surgery, Vilnius, Lithuania*

Introduction: Appendiceal endometriosis is a rare condition that can mimic acute appendicitis and lead to diagnostic challenges. Among patients undergoing appendectomy, the occurrence of appendiceal endometriosis is reported to be between 0.054% and 0.8%. This case report highlights the importance of endometriosis as a potential cause of recurrent abdominal pain, especially in women of reproductive age.

Case Report: A 20-year-old female presented with a six-month history of intermittent abdominal discomfort and pain unrelated to menstruation. During this period the patient was examined by multiple healthcare providers, which led to inconclusive results, with ultrasounds showing nonspecific findings. She was initially treated with antibiotics for suspected lymphadenopathy, which provided temporary symptom relief. Persistent symptoms led to a final presentation with fever and elevated inflammatory markers. Ultrasonography showed a view of acute appendicitis with periappendiceal abscess. A laparoscopy was performed, revealing a purulent mass adherent to the appendix and right ovary. Histopathology examination confirmed gangrenous appendicitis with endometriosis in the subserosa and chronic active inflammation in the fallopian tube fimbriae.

Discussion: This case illustrates the diagnostic challenge of appendiceal endometriosis, which can present symptoms mimicking acute appendicitis or other gastrointestinal disorders. The patient's recurrent symptoms and initial non-specific findings led to delayed diagnosis. The case emphasizes the need for a high index of suspicion for endometriosis in women with recurrent abdominal pain, even when initial investigations are inconclusive.

Conclusion: Appendiceal endometriosis should be considered in the differential diagnosis of young women presenting with recurrent abdominal pain. Early recognition and appropriate imaging can lead to timely intervention, preventing complications such as abscess formation and improving patient outcomes.

Keywords: Appendiceal endometriosis, recurrent abdominal pain, delayed diagnosis, laparoscopy, histopathology

GENDER-BASED DIFFERENCES IN PAIN SCALE AND RECURRENCE OF PILONIDAL DISEASE

Author: Monika Vaičiūtė[1], 6th year
Supervisor: Edvinas Dainius[2], M.D.
[1]*Faculty of Medicine, Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*Department of Surgery, Lithuanian University of Health Sciences, Kaunas, Lithuania*

Background and aim of the study. Pilonidal disease (PD) is an inflammatory condition affecting the sacrococcygeal region, commonly seen in young adults. Epidemiological studies indicate that females are diagnosed with PD less frequently, leading to limited research on sex-based differences. The aim of this study is to evaluate differences in symptomatology, pain perception, and the rate of failed surgical interventions between sexes. Understanding these differences is essential for improving diagnosis, treatment approaches, and patient outcomes.

Methods and materials. A literature search was conducted in February 2025 using the keywords: “pilonidal disease,” “female/women,” “gender,” and “recurrence” in the PubMed, ScienceDirect, and UpToDate databases. Inclusion criteria were not limited to human studies, year of publication, or article type, allowing for a broader analysis of available data.

Results. Findings suggest that while PD incidence is higher in males, females tend to present with symptoms at a younger age and report greater initial pain scores. This may be linked to a lower incidence of females presented with drainage, as patients with drainage reported lower pain scores than those without. Additionally, surgical treatment outcomes indicate a slightly higher recurrence rate in females, potentially due to prolonged healing, therefore, a higher risk of treatment failure. Pain perception differences may be attributed to hormonal influences, the use of female contraceptives, and variations in pain tolerance between sexes.

Conclusions. Females with PD tend to present at a younger age and experience greater initial pain. There is also a higher rate of recurrence in females, likely due to differences in healing patterns and surgical outcomes. Increased awareness of these differences can aid in diagnosis and tailored treatment strategies, ultimately improving patient care and outcomes.

Keywords. Pilonidal disease; pain scores; females/women; gender differences.

ANASTOMOTIC LEAKAGE IN COLORECTAL SURGERY: CASE CONTROL STUDY

Author: Ugnė Šilinskaitė[1], 4th year
Supervisor: Tomas Poškus[2], M.D., PhD, Prof.
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*Translational Health Research Institution, Faculty of Medicine, Vilnius University, Vilnius, Lithuania*

Background and aim of the study. Anastomotic leakage remains one of the most concerning complications following intestinal resection. Currently, no universally accepted guidelines exist for the effective management of this complication. The aim of the study was to compare the diagnostic approaches, treatment strategies, and clinical outcomes of patients who experienced anastomotic leakage.

Methods and materials. Using databases of Vilnius University Hospital Santaros Clinics and the National Cancer Institute, we identified patients who underwent intestinal resection surgery at these institutions and experienced anastomotic leakage between 2014 and 2018. Control group patients, who did not experience anastomotic leakage, were selected based on their biological sex, age, and the location of the resection. Two control patients were matched for each patient with anastomotic leakage. Clinical, demographic, diagnostic, and therapeutic data were compared across patient groups. Statistical analysis was performed using "Excel", "R Commander", and "R Studio" software.

Results. A total of 183 patients were enrolled in the study. 61 patients experienced anastomotic leakage, while 122 - were included in the control group. The mean age of patients with anastomotic leakage was 68.18 years, compared to 68.94 years in the control group. On average, anastomotic leakage was diagnosed 5.76 days after surgery. Patients with anastomotic leakage underwent an average of 1.49 abdominal imaging procedures postoperatively, compared to 0.59 procedures in the control group. Abdominal ultrasound was the most frequently used imaging modality. Patients with anastomotic leakage had a mean postoperative hospital stay of 24.95 days (4-102), while the control group had a mean stay of 10.0 days (4-28). Ten patients (16.13%) with anastomotic leakage died in the hospital, compared to zero patients (0%) in the control group.

Conclusions. Anastomotic leakage is a life-threatening complication after colorectal resections, associated with high mortality and increased duration of hospital stay.

Keywords. Anastomotic-leakage, anastomotic-leak, colorectal, complication.

REVERSAL OF ROUX-EN-Y GASTRIC BYPASS DUE TO PROTEIN-ENERGY MALNUTRITION: A CASE REPORT

Author: Jakub Łomzik[1], 5th year, Wiktoria Kozłowska[1], 5th year, Paulina Hnatuśko[1], 5th year, Laura Bursztynowicz[1], 5th year
Supervisor: Piotr Wojskowicz[2], PhD
[1]*Student Scientific Association, 1st Department of General and Endocrine Surgery, Medical University of Bialystok*
[2]*1st Department of General and Endocrine Surgery, Medical University of Bialystok*

Introduction. Bariatric surgery is one of the therapeutic options for obesity. However, it carries the risk of postoperative complications, including protein-energy malnutrition. In such cases, surgical reversal, and restoration of the anatomical continuity of the gastrointestinal tract may be an effective intervention.

Case Report. A 58-year-old patient with a history of protein-energy malnutrition, erythematous gastropathy, hiatal hernia, post-stroke paresis, and depression was admitted to the hospital for reversal of a Roux-en-Y gastric bypass (RYGB). On admission, he complained of chronic fatigue, muscle weakness, dry skin, drowsiness, and postprandial diarrhea. In 2016, he had undergone RYGB for class III obesity. After the surgery, he experienced rapid weight loss (from 136kg to 71kg) and progressive weakness over time. Additionally, he developed leg numbness and dermatological changes attributed to nutritional deficiencies. Laboratory tests revealed anemia, which was treated with iron and vitamin B12 supplementation. Two years after RYGB, the patient underwent reoperation due to an internal hernia. Despite appropriate treatment and increased caloric intake, his condition did not improve. Ultimately, a decision was made to reverse the RYGB. A laparoscopic gastro-gastric anastomosis was performed along with the resection of a 25 cm segment of the alimentary limb. Postoperatively, the patient felt well and was discharged home.

Discussion. Protein-energy malnutrition is an uncommon complication of RYGB. Its severity can range from mild to severe, with the latter occurring in 4.7% of patients. Management primarily involves correcting macro- and micronutrient deficiencies through supplementation and dietary modifications. In cases of treatment failure, especially in severely affected patients, surgical intervention may be crucial.

Conclusion. Reversal of RYGB is a highly effective, well-tolerated procedure in the treatment of bariatric surgery-related malnutrition. Therefore, given the patient's condition, implementing this approach appears to be a justified course of action.

Keywords. Bariatric surgery; Roux-en-Y gastric bypass; protein-energy malnutrition; reversal of RYGB.

IS THERE AN IDEAL FOLLOW-UP PERIOD FOR PILONIDAL DISEASE?

Author: Julija Garnytė[1], 6th year; Monika Vaičiūtė[1], 6th year
Supervisor: Edvinas Dainius[2], M.D.
[1]*Faculty of Medicine, Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*Department of Surgery, Lithuanian University of Health Sciences, Kaunas, Lithuania*

Background and aim of the study. Pilonidal disease is a condition that can range from minor cyst to the development of extensive sinus formations. The primary treatment is surgery, however, both conservative and more invasive surgical methods fail to eliminate risks, such as recurrences. Issues arise from the lack of universal definition for a recurrence and an optimal follow-up period for patients after the treatment. This review aims to investigate the ideal duration of follow-up after pilonidal disease treatment, focusing on recurrence rates and the effectiveness of monitoring.

Methods and materials. A literature search was performed using the keywords "pilonidal disease," "follow-up period," and "recurrence" across the PubMed, ScienceDirect, and UpToDate databases. The inclusion criteria were not restricted by publication year, or article type, enabling a comprehensive analysis of the available data.

Results. The results indicate that follow-up periods vary widely across studies, with some recommending only short-term monitoring, while others suggest extended follow-up. A follow-up period of up to 5 years is often recommended for detecting recurrences and managing complications. Recurrence should only be diagnosed after the surgical wound has fully healed, there has been no trauma to the coccygeal region after closure, and at least one of the following criteria is met: diagnosis by a doctor, need for reintervention (incision/excision), formation of a new sinus, presence of hair in a sinus opening, or discharge of pus.

Conclusions. A follow-up period of at least 5 years is considered the gold standard for determining treatment success and detecting recurrence. However, further research is necessary to define the optimal duration for effective management and establish clear guidelines for follow-up care in pilonidal disease patients.

Keywords. Pilonidal disease; follow-up period; recurrence.

ARTIFICIAL INTELLIGENCE IN GENERAL SURGERY: A SYSTEMATIC REVIEW

Author: Milvydė Marija Tamutytė[1], 6th year; **Beatričė Kuzminaitė[1], 6th year**
Supervisor: Gintautas Brimas[2], M.D., PhD, Prof. (HP)
[1]*Vilnius University, Vilnius, Lithuania*
[2]*Vilnius Republican University Hospital, Vilnius, Lithuania*

Background and aim of the study. Artificial intelligence (AI) has rapidly evolved in recent years, demonstrating significant potencial in various fields of medicine, including general surgery. The aim of this study is to review the possible integration of AI in general surgery, based on the latest literature.

Methods and materials. A literature search was conducted using the PUBMED (Medline) database. The search keywords were: "artificial intelligence AND general surgery." Articles published between 2020 and 2025 were included. A study selection scheme was created following the PRISMA method. Included articles had to meet the following selection criteria: describe the use of AI in adult general surgery and have full-text free access. Systematic reviews, narrative reviews, and meta-analyses were excluded. Ultimately, 11 articles were included.

Results. Artificial intelligence tools have shown significant potential in improving the detection of neoplasms during both esophagogastroduodenoscopy (EGD) and colonoscopy, regardless of the endoscopist's experience. Studies show that using AI in colonoscopies can increase the adenoma detection rate (ADR) by 22–36% and the polyp detection rate (PDR) by 21–46% compared to conventional methods, particularly for small, flat and isochromatic lesions that are often overlooked. AI models designed to diagnose early neoplastic changes during esophagogastroduodenoscopy (EGD) demonstrated a high accuracy of 95.4% in detecting malignant zones. Furthermore, AI applications extend beyond diagnostics, showing potential in surgical training through virtual reality simulators and intraoperative decision support.

Conclusions. Integrating AI into clinical practice has great potential to improve the quality of diagnostic procedures by reducing the risk of human error. While AI improves diagnostic accuracy and procedural efficiency, further research is needed to validate its real-world effectiveness and ensure safe, ethical implementation in surgery.

Keywords. Artificial intelligence in surgery; AI-assisted endoscopy

INFERIOR VENA CAVA-ATRIAL ANASTOMOSIS IN DECEASED DONOR LIVER TRANSPLANTATION WITH EXTENSIVE INFERIOR VENA CAVA OCCLUSION – A CASE REPORT AND LITERATURE REVIEW

Author: Jakub Rochoń[1], 5 th year
Supervisor: Piotr Kalinowski[1], M.D., PhD, Assoc. Prof.
[1]*Department of General, Transplant and Liver Surgery, Medical University of Warsaw, Warsaw, Poland*

Introduction. Vascular anomalies represent significant challenges for surgical teams and frequently necessitate individualized treatment strategies. The extant guidelines lack clarity regarding the management of complete inferior vena cava (IVC) obstruction. Liver transplantation (LTx) appears to be technically impossible in this situation. However, in the literature, a few specific instances where non-standard techniques have been described in patients with complete IVC obstruction.

Case report. We report a case of a 25-year-old woman with decompensated cirrhosis due to Budd-Chiari syndrome with coexisting systemic lupus erythematosus, autoimmune hepatitis, and primary biliary cholangitis. The patient had complete IVC obstruction with extensive collateral circulation via prevertebral veins that drained blood from the lower extremities and kidneys into the azygos-hemiazygos veins. This vascular anomaly enabled isolation and excision of the obstructed IVC segment, allowing for an alternative anastomosis. A transdiaphragmatic IVC-atrial anastomosis was performed, and a blind pouch of infrahepatic graft's IVC was fashioned. Postoperative ultrasound demonstrated patent hepatic venous flow with a triphasic pattern, indicating satisfactory graft function. During the postoperative period patient developed severe complications, including hematoma, cardiovascular and respiratory insufficiency, and intestinal perforation. Despite normal graft function, the patient died 56 days post LTx.

Discussion. Minimally invasive IVC procedures are recommended to remove the IVC occlusion before LTx, however in cases of extensive IVC occlusion alternative procedures like venoplasty, graft implantation, or modified anastomoses may be considered. These findings underscore the importance of adapting surgical methods to individual anatomical variations, particularly when conventional approaches are rendered unfeasible by extensive vascular pathology.

Conclusions. The complete obstruction of the inferior vena cava is not a contraindication for liver transplantation provided an individualized approach and careful planning is employed. However, comorbidities and complications can significantly impact outcomes, emphasizing the need for further research and refinement of techniques in high-risk patients.

Keywords. Liver transplantation; Hepatic venous reconstruction; Budd-Chiari syndrome, Surgical technique

SESSION C
Exploring Clinical and Research Perspectives in Gynecology, Pediatric Surgery, and Urology

Jury members:

- **Ernestas Frolovas**
- **Rūta Vilija Dagilytė**
- **Magdalena Bizoń**
- **Maciej Olszewski**
- **Martynas Stanionis**

Speakers:

1. **Austėja Zubauskaitė**, Vilnius, Lithuania
2. **Paulina Stalgytė, Estela Koženevskytė,** Kaunas, Lithuania
3. **Alicija Šavareikaitė,** Vilnius, Lithuania
4. **Paulė Kergytė,** Vilnius, Lithuania
5. **Milda Kančytė,** Vilnius, Lithuania

Vilnius Surgical Symposium for Medical Students

VAGINAL NATURAL ORFRICE TRANSLUMINAL ENDOSCOPIC SURGERY (VNOTES) IN GYNAECOLOGY: LITERATURE REVIEW

Author: Austėja Zubauskaitė[1], 5th year
Supervisor: Diana Bužinskienė[2,3], M.D., PhD
[1]*Vilnius university, Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius university Santaros clinics, Vilnius, Lithuania*
[3]*Vilnius university, Faculty of Medicine, Clinic of Obstetrics and Gynaecology*

Background and aim of the study. Today, VNOTES offers minimally invasive surgery in various fields. With this study, we aim to evaluate the use of VNOTES in gynaecology and review postoperative outcomes compared to laparoscopic surgery.

Methods and materials. Research was conducted on literature of VNOTES from 2020 – 2025 using Pubmed, UpToDate and ResearchGate browsers.

Results. Since colpotomy was performed widely before, transvaginal natural orifice transluminal endoscopic surgery (VNOTES) was the first to be adapted clinically. Today, VNOTES is most used for hysterectomies, however, literature reports the possibilities of VNOTES in treating uterine tumors, adnexal pathologies, uterine prolapse etc. Furthermore, VNOTES could be adapted in urology, abdominal surgery and other. Benefits of VNOTES include significantly less postoperative pain, faster recovery and improved cosmetic outcomes compared to laparoscopy. The total blood loss and the risk of postoperative complications are low and do not significantly differ from laparoscopic surgery. According to research, patients, treated by VNOTES hysterectomy, exhibit higher scores of life quality and sexual function questionnaires compared to laparoscopic hysterectomy. The main difference from laparoscopy is that VNOTES can be performed without pneumoperitoneum, resulting in better outcomes for patients with poor cardiopulmonary function. Avoiding pneumoperitoneum could be beneficial in treating pregnant patients since increased abdominal pressure can reduce uterine blood flow. Moreover, VNOTES is considered safe in pregnant patients, especially in early pregnancy. In late pregnancy the manipulations are limited by enlarged uterus. No pregnancy complications or harmful effect on future pregnancies or vaginal deliveries were reported.

Conclusions. VNOTES can offer better postoperative outcomes, resulting in better life quality of patients. This method could be adapted to various surgical fields as well as gynaecology, and it could be used in pregnancy or for patients with poor cardiopulmonary function resulting in lower risk of complications.

Keywords. VNOTES, Endoscopic surgery, Transvaginal surgery.

LAPAROSCOPIC SURGICAL MANAGEMENT OF OVARIAN TERATOMA WITH UNUSUAL HISTOLOGICAL CHARACTERISTICS: A CASE REPORT

Author: Paulina Stalgytė[1], 6th year, Estela Koženevskytė[1], 6th year
Supervisor: Povilas Jukna[1,2], M.D., PhD candidate
[1]*Faculty of Medicine, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*Department of Obstetrics and Gynaecology ,Kaunas Clinics, Lithuania*

Introduction. Ovarian dermoid cysts, which are also called mature cystic teratomas (MCTs), are the most common ovarian germ cell tumors in young women. Mature teratomas are composed of mature tissues representing elements derived from more than one embryonic germ layer (ectoderm, mesoderm, and endoderm), with ectodermal derivatives being the usual predominant component; however, the finding of a well-differentiated cerebellum is extremely rare.

Case report. A 25-year-old woman was referred for evaluation of an ovarian mass. She presented with sudden-onset lower abdominal pain, nausea, and vomiting. Gynecological history was unremarkable. Transvaginal ultrasound revealed a multilocular cystic mass in the left ovary with irregular contours and free fluid in the posterior cul-de-sac. Laparoscopic right ovarian cystectomy and adhesiolysis were performed. Intraoperatively, a left adnexal cyst was identified, which ruptured during enucleation, releasing bone, cartilage and hair content. Histopathology confirmed a mature cystic teratoma containing skin appendages, sebaceous glands, adipose tissue, cartilage, bone, intestinal-type mucinous glands, ganglion cells, cerebellar structures, and arachnoid mater components.

Discussion. Early diagnosis and surgical management are crucial in preventing complications such as ovarian torsion, which can lead to ovarian necrosis or increase the risk of malignancy. Laparoscopic techniques offer a minimally invasive approach, reducing recovery time and postoperative complications. While the presence of skin, hair, and teeth is characteristic of mature teratomas, rare findings, such as cerebellar structures, highlight the diverse differentiation potential of these tumors.

Conclusions. Mature ovarian teratomas can present with acute symptoms due to complications like torsion, necessitating prompt surgical intervention. This case highlights the role of laparoscopy in effectively managing these tumors. Awareness of rare histopathological findings expands understanding of their varied tissue composition, contributing to improved patient care.

Keywords. Teratoma, Cerebellum, Ovary, Cystectomy, Case report.

3D PRINTING TECHNOLOGIES IN PEDIATRIC SURGERY: INNOVATIONS IN SURGICAL PLANNING AND TREATMENT

Author: Alicija Šavareikaitė[1], 5th year
Supervisor: Paulius Valatka[2], M.D.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius University Hospital Santaros Klinikos Children's Surgery, Orthopaedic and Traumatology Center, Vilnius, Lithuania*

Background and aim of the study. 3D-printed objects have significant applications in the medical field, serving as essential tools for studying complex cases, creating anatomical models, patient-specific surgical guides, and customized prosthetics. To assess the current use of 3D- printing techniques in Pediatric Surgery, a systematic literature review was conducted using the MEDLINE database, focusing on 3D applications in diagnostics and treatments.

Methods and materials. A systematic review was conducted using comprehensive healthcare data, focusing on 3D printing materials in diagnostics, surgical planning, and patient-specific prosthetics for pediatric and adolescent populations. The review utilized MeSH keywords, the PICO framework, and adhered to the PRISMA guidelines to ensure methodological standards. The primary outcomes evaluated included patient demographics and the applications of 3D printing technology, while secondary outcomes encompassed complications and duration of procedures.

Results. A total of 133 articles were reviewed, leading to 18 selected for analysis, which included 141 patients with an average age of 8.93 years (ranging from 4 months to 26 years). The gender distribution was 71 males and 79 females based on 15 articles. Based on 9 articles, atypical anatomical 3D models were created for 39 patients, with Pectus Excavatum being the most common diagnosis (92.86%) and 3 patients (7.14%) underwent surgical 3D practice simulations for humerus fractures and congenital anomalies. In terms of treatment, 5 articles described 44 patients, primarily with intrathoracic tracheobronchomalacia (68.18%), who mostly received 3D-printed left mainstem bronchus splints (22.27%). Four articles addressed both diagnostic and treatment applications in 86 patients, focusing on congenital scoliosis (67.44%) with 3D spinal models and individualized guide plates. Overall, 7 complications related to 3D-printed implants were noted in the treatment studies.

Conclusions. 3D printing represents a significant advancement in Pediatric Surgery by enabling customized anatomical models, improving diagnostic processes, surgical planning, and treatment for conditions such as Pectus Excavatum and congenital scoliosis.

Keywords. 3D printing; Diagnostic Applications; Surgical Planning.

APPLICATION OF VIRTUAL REALITY TECHNOLOGY IN REDUCING CHILDREN'S PAIN, FEAR, AND ANXIETY DURING SURGICAL PROCEDURES

Author: Paulė Kergytė[1], 4th year
Supervisor: Paulius Valatka[2], M.D.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius University Hospital Santaros Klinikos, Pediatric Surgery, Orthopaedic and Traumatology Center, Vilnius, Lithuania*

Background and aim of the study. Virtual reality (VR) immerses users in a 3D environment, resembling either a real or fantasy world. It has progressed in various fields, including education, healthcare, and corporate training. Currently, research investigates whether VR can reduce children's distress during operations and procedures. This systematic review aims to check VR's effectiveness in alleviating pain, anxiety, and fear in children during the perioperative period and painful procedures.

Methods and materials. A systematic review was performed following PRISMA guidelines and PICO framework, with a comprehensive search in PubMed using MeSH terms and keywords. Inclusion criteria focused on patients under 18 undergoing surgical procedures involving VR. A total of 376 articles were selected.

Results. During the article identification process, 353 articles were excluded. Following themscreening an additional 10 articles were excluded, leaving a total of 13 articles included in this review. The patient sample size was 664, with ages ranging from 5 to 18 years (reported in 10 articles), and a median age of 9.95. The gender distribution included 378 males and 285 females. Across all articles, circumcision was the most common operation performed using VR, involving 123 patients, while burn treatment was the most frequently administered VR-assisted procedure, involving 53 patients. The Faces Pain Scale (including modified versions) showed the most significant and statistically relevant change between the control and VR groups, as reported in three articles on operations and three articles on procedures, indicating that VR is the most effective method for pain reduction.

Conclusion. This systematic review underscores the significance of virtual reality technology as a non-pharmacological, non-invasive, and engaging tool for reducing discomfort in children during various painful procedures.

Keywords. Virtual reality; Pediatric surgery; Pain; Anxiety; Fear.

MANAGEMENT OF ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA IN A NEWBORN: A CASE REPORT

Author: Milda Kančytė[1], 6th year
Supervisor: Marie Rock[2], M.D.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Lienz District Hospital, Department of Pediatrics, Lienz, Austria*

Introduction. Esophageal atresia with tracheoesophageal fistula (EA/TEF), affecting approximately 1 in 3,000 to 5,000 births, is the most prevalent congenital defect of the upper gastrointestinal tract. We present the postnatal management of this congenital anomaly in a district hospital, necessitating transfer to a pediatric surgical center, as early surgical intervention is crucial for improving outcomes.

Case report. A newborn girl was delivered via cesarean section at 38+2 weeks. No prenatal abnormalities were detected. 1.5 hours after birth, the infant exhibited retching and gargling, improving with suction. After two feedings, the infant vomited. Eight hours later, similar symptoms occurred with SpO2 of 90%, necessitating transfer to the neonatal intensive care unit for continuous positive airway pressure (CPAP). Physical exam showed rattling lung sounds and a soft abdomen. All attempts to insert a gastric tube were unsuccessful. X-ray revealed significant gastric air, raising suspicion of EA/TEF. As a result, aspiration pneumonia was considered, and antibiotic therapy was initiated. Intubation was performed for transport to a specialized surgical center. Right-sided laparotomic repair of EA/TEF was successfully performed, confirming the clinical diagnosis of EA/TEF type IIIb.

Discussion. According to the literature, this condition may be detectable prenatally in only about 10% of cases, with nonspecific signs such as polyhydramnios and a small stomach bubble. This poses a challenge when delivering a potentially high-risk infant in smaller medical centers without pediatric surgery available. Therefore, neonatal teams in these centers must be aware of this pathology, as it occurs less frequently than in larger centers with higher birth rates, as illustrated by the presented case.

Conclusions. Although EA/TEF is rare and challenging to detect prenatally, postnatal diagnosis, including gastric tube placement, is crucial. Early intervention with thoracotomy or thoracoscopic surgery is essential for enhancing survival and long-term prognosis.

Keywords. Esophageal atresia; tracheoesophageal fistula; pediatric surgery.

OVARIAN BRENNER TUMOR WITH CONTRALATERAL OVARIAN CYSTADENOMA: CASE REPORT AND LITERATURE REVIEW

Author: Austėja Zubauskaitė[1], 5th year
Supervisor: Diana Bužinskienė[2], M.D., PhD
[1]*Vilnius university, Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius university, Faculty of Medicine, Clinic of Obstetrics and Gynaecology*

Introduction. Brenner tumors are rare epithelial neoplasms, accounting for less than 5 % of epithelial ovarian tumors, of which around 1 % are malignant. Usually, tumors are found in asymptomatic postmenopausal women with the diameter less than 2 cm, as a result, challenging the diagnostics during routine transvaginal ultrasound.

Case report. A 72-year-old asymptomatic woman was diagnosed with left ovarian cyst during routine appointment. Patient was at the menopausal age; last menstrual period was 15 years ago. Transvaginal ultrasound revealed 2,7 x 3,1 cm left ovarian cyst with no visible blood flow or insertions; right ovary was atrophic with no visible formations; two uterine myomas were found. Laparoscopic bilateral adnexectomy was performed. Histological examination of the sample confirmed left ovarian cystadenoma and revealed 1 mm Brenner tumor of the right ovary and serous tubal intraepithelial lesion (STIL) of the right fallopian tube. No signs of atypical cells, mitotic figures or hormonal activity were noticed, confirming the diagnosis of benign Brenner tumor.

Discussion. Due to small size of the tumor, Brenner tumors are usually detected incidentally during histological examination. The tumor is characterized by well-circumscribed nests of transitional epithelium surrounded by fibrous tissue. Brenner tumors are most occurred in postmenopausal patients, aged from 50 to 70 years, however it continues to be a rare type of tumor. Association with second ovarian tumor, especially mucinous or serous cystadenomas has been reported – approximately 16 % of Brenner tumors present with mucinous tumors. In this case, the presence of contralateral ovarian cystadenoma allowed early diagnostics of Brenner tumor and better treatment outcomes.

Conclusions. This case emphasizes the challenge of diagnosing rare conditions like ovarian Brenner tumors and suggests that bilateral adnexectomy should be considered for postmenopausal patients with ovarian cysts.

Keywords. Brenner tumor; ovarian cystadenoma; ovarian tumor; epithelial neoplasms.

SESSION D
Cutting-Edge Techniques in Cardiac and Vascular Surgery

Jury members:

- **Artūras Mackevičius**
- **Valerija Mosenko**
- **Karolis Jonas**

Speakers:

1. **Kornelija Gazbeinaite,** Vilnius, Lithuania
2. **Matas Žekonis,** Vilnius, Lithuania
3. **Augustė Melaikaitė,** Vilnius, Lithuania
4. **Gabija Žymantaitė,** Vilnius, Lithuania
5. **Alicija Krasavceva,** Vilnius, Lithuania
6. **Patricija Griškaitė,** Vilnius, Lithuania
7. **Justina Grigaitienė, Augustė Aleknaitė,** Vilnius, Lithuania
8. **Meilė Jucytė,** Vilnius, Lithuania

Vilnius Surgical Symposium for Medical Students

CASE REPORT: SUCCESSFUL TREATMENT OF COARCTATION OF THE AORTA WITHOUT SURGICAL CORRECTION IN AN EXTREMELY LOW BIRTH WEIGHT NEWBORN

Author: Kornelija Gazbeinaite[1], 5th year
Supervisors: Arminas Skrebunas[2],4 M.D., Sigitas Cesna[3,4] M.D., PhD, Ausrine Pliauckiene[5,6], M.D., PhD, Arunas Liubsys[5,6] M.D., PhD
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*Vascular and Endovascular Surgery Center, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*
[3]*Division of Cardiology and Vascular Diseases, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*
[4]*Clinic of Cardiac and Vascular Diseases, Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[5]*Neonatology Centre, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*
[6]*Clinic of Children's Diseases, Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, Vilnius, Lithuania*

Introduction. Aortic coarctation is a life-threatening condition that requires early diagnosis and urgent surgical intervention. This condition accounts for 5-8% of congenital heart defects, which develop before birth due to abnormalities in aortic formation. The coarctation of the aorta is a narrowing of the aorta, disrupting blood flow and leading to inadequate systemic perfusion.

Case report. An 810 g male infant was born via cesarean section at 29 weeks of gestation due to maternal preeclampsia. CPAP therapy was initiated after the instillation of the surfactant and stabilization of the condition in the delivery room. On day 7, a persistent systolic heart murmur was auscultated, prompting further evaluation with a CT scan, which confirmed the diagnosis of aortic coarctation. The baby gradually deteriorated despite medical treatment, yet surgical correction was technically impossible. On day 28th of life balloon angioplasty and stenting of the aorta was performed. A 40-week-old corrected-age baby was discharged from the hospital in good condition with a long-term follow-up plan.

Discussion. Coarctation of the aorta is a common congenital anomaly that can be successfully corrected surgically to enhance blood flow, reducing the risk of hypoperfusion and shock. In extremely low birth weight neonates this intervention is complicated or even unfeasible. Transcatheter interventions are emerging as the primary and sometimes the only viable management option for coarctation due to their minimally invasive nature and improved safety in preterm infants. However, close cooperation between multidisciplinary team members is needed to achieve optimal results.

Conclusions. Early diagnosis and timely intervention are crucial for managing aortic coarctation in newborns. Advances in transcatheter techniques have significantly improved survival rates and the quality of life even in premature babies, yet long-term monitoring remains essential. Ongoing research and evolving therapeutic strategies offer further enhanced treatment efficacy and patient outcomes.

Keywords. Coarctation; Aorta; Pre-term newborn; Stenting.

SUPPURATIVE GIGANTIC COMMON FEMORAL ARTERY PSEUDOANEURYSM: TREATMENT COURSE WITH SURGICAL RESECTION AND VAC THERAPY

Author: Matas Žekonis[1], 5th year
Supervisors: Ugnė Katiliūtė[1,2], resident doctor; Simonas Jonas Norvydas[2] MD; Arminas Skrebūnas[2], MD, PhD.
[1]*Vilnius University, Faculty of Medicine,*
[2]*Vilnius, Lithuania Vilnius University hospital Santaros klinikos, Vilnius, Lithuania*

Introduction. Femoral artery pseudoaneurysm (FAP) is a vascular complication that carries a significant risk of rupture, distal embolization, localized pain, neuropathy. It is particularly severe when associated with critical limb ischemia or infection. In this case, we present the complexities of managing a suppurative gigantic pseudoaneurysm in a high-risk vascular patient.

Case report. A 65-year-old male presented to the emergency department with complaints of a growing, pulsating mass in the right groin, along with ischemic rest pain of the right leg. The overlying skin of the mass was necrotic. Computed tomography revealed infected pseudoaneurysm (~ 98x117x144 mm) of the common femoral artery (AFC) without radiological signs of rupture, occluded native arteries and prosthetic bypass grafts. Initial management involved a complete resection of the pseudoaneurysm, ligation of AFC, initiation of systemic antimicrobial therapy, and vacuum-assisted closure (VAC) therapy for a large tissue defect after extensive debridement of necrotic tissue. The patient was discharged after over a month in the hospital to continue wound care for leg ulcers.

Discussion. Infected pseudoaneurysms are a serious clinical challenge due to risks of rupture, haemorrhage, sepsis, and limb loss. Surgical excision is the gold standard, as poor infection control and delayed removal can be life-threatening. Alternative treatments, such as endovascular repair or percutaneous thrombin injection, have been explored in select cases. Antimicrobial therapy, wound management, and infection control play a major role, with VAC therapy being essential in cases of significant tissue damage.

Conclusions. A large local infection made immediate vascular reconstruction too risky. The priority was to control the infection by resecting the suppurative pseudoaneurysm and ligating the artery, postponing revascularization to avoid graft contamination. This approach reduced surgical trauma and organ system load, and the patient's chronic limb ischemia did not worsen despite the artery ligation.

Keywords. Pseudoaneurysm; chronic limb ischemia; VAC therapy; reconstructive vascular surgery.

THE IMPACT OF LATENCY AND FORCE ON PERFORMANCE IN AN ENDOVASCULAR SIMULATION TASK: IMPLICATIONS FOR ROBOTIC TELESURGERY

Author: Augustė Melaikaitė[1], 4th year
Supervisor: Tomas Baltrūnas[1,2], M.D., PhD
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius University Hospital Santaros klinikos, Vilnius, Lithuania*

Background and aim of the study. Endovascular procedures necessitate precise force application and control, which may be compromised by latency inherent to robotic and telesurgical systems. This study aimed to evaluate the effects of latency and applied force on task performance in an endovascular simulation, exploring the potential role of haptic feedback in mitigating performance degradation.

Methods and materials. A prospective, observational, cross-sectional study was conducted using a custom-developed endovascular simulator. A total of 116 healthy participants were instructed to maintain a target force (0.6N, 1.2N, or 1.8N) for up to 10 seconds under varying latency conditions (0, 100, 200, and 400ms). Performance outcomes were analyzed across three age cohorts: Group 1 (18–25 years), Group 2 (35–45 years), and Group 3 (55–65 years).

Results. The youngest cohort exhibited the highest performance, while the oldest group demonstrated the lowest across all conditions. The Kruskal-Wallis test found statistically significant performance differences between age groups ($p<0.05$). Post hoc analysis revealed a significant gap between the youngest and oldest groups in all tasks. The Friedman test indicated significant differences across force and latency conditions ($p<0.05$). Post hoc analysis further confirmed significant variations between all force and latency conditions, except between 1.2N and 1.8N at 400 ms ($p>0.05$). Spearman's correlation analysis identified a weak negative correlation between force and duration ($\rho_s=-0.257$) and a strong negative correlation between latency and duration ($\rho_s=-0.642$), indicating that higher latency significantly impaired task performance.

Conclusions. This study demonstrates that both latency and applied force negatively affect performance, with latency exerting a stronger effect. The results highlight the importance of minimizing latency, particularly for older operators. Furthermore, findings suggest that haptic feedback mechanisms may be more effective at lower force levels, highlighting the need for further investigation into its potential benefits.

Keywords: Telesurgery, Endovascular, Latency, Force, Haptic Feedback

ABDOMINAL COMPARTMENT SYNDROME AFTER EVAR. A CASE REPORT

Author: Gabija Žymantaitė[1], 5th year
Supervisor: Artūras Mackevičius[1,2], M.D.
[1]*Vilnius University, Faculty of Medicine, Vilnius, Lithuania*
[2]*Republican Vilnius University Hospital, Vilnius, Lithuania*

Introduction. Abdominal compartment syndrome (ACS) after endovascular repair (EVAR) of a ruptured abdominal aortic aneurysm (rAAA) is a critical condition that can lead to potential multisystem organ failure and death. Herein, we present a case of unsuccessful ACS management after rEVAR following rapidly progressive acute kidney injury.

Case report. A 63-year-old male presented to the Emergency Department, complaining of sudden lower back pain radiating into the left groin. Patient had a history of arterial hypertension and alcohol dependence. Patient was hemodynamically stable, abdomen distended, painful on palpation. Abdominal ultrasound and CTA scan revealed a rAAA with maximum diameter of 7,5 cm. Active contrast extravasation into the left retroperitoneal space and massive hematoma were observed. An endovascular repair was successfully performed without signs of endoleak on the control angiography, and the patient was transferred to ICU. Over a 3-hour period an ACS was suspected clinically, as the rapidly progressive acute kidney injury, increasing lacticaemia, acidosis and intravesicular pressure 24 mm Hg were present. Therefore, a diagnostic laparotomy and decompression surgery were performed immediately. Post-operative period complicated by haemorrhagic shock, acute respiratory failure, pneumonia and consciousness disturbance. Over a 4-week period patient's condition deteriorated, and patient died.

Discussion. EVAR for rAAA and presence of retroperitoneal hematoma should raise suspicion for ACS. This fatal syndrome results from increased pressure in abdominal cavity (IAP >20 mm Hg), impairing organ function. The renal system is typically compromised when IAP exceeds 15 mm Hg. Preventing ACS development begins with regular measurement of IAP in at-risk patients.

Conclusions. This case highlights the challenges of managing rapidly progressing ACS, underlining the need for vigilant IAP monitoring, prompt decompression, and a multidisciplinary approach in critical care. Early detection and intervention in ACS following rEVAR do not always result in a positive outcome.

Keywords. Abdominal compartment syndrome; Acute kidney injury;

UNCOMMON PRESENTATION OF A GIANT PETROUS INTERNAL CAROTID ARTERY ANEURYSM: A CASE OF ISOLATED ABDUCENS NERVE PALSY

Author: Alicija Krasavceva[1], 6th year
Supervisor: Audrius Širvinskas 2 , M.D.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Department of Radiology, Republican Vilnius University Hospital, Vilnius, Lithuania*

Introduction. Giant intracranial aneurysms are rare, with those located in the petrous segment of the internal carotid artery being even less common. These aneurysms can exert mass effect on adjacent structures, causing neurological deficits such as cranial nerve palsies. This report presents a case of a giant petrous internal carotid artery aneurysm causing isolated abducens nerve palsy.

Case report. A 60-year-old female presented with persistent headaches and binocular diplopia. Physical examination revealed a left sixth cranial nerve palsy. Imaging, including magnetic resonance, computed tomography angiography and cerebral angiography, identified a giant, partially thrombosed saccular aneurysm at the petrous-cavernous segment junction of the left internal carotid artery. Given the aneurysm's size, symptomatic presentation, and risk of growth with worsening symptoms potentially impacting the patient's quality of life, endovascular embolization with a flow-diverter stent and coil placement was performed, resulting in significant clinical improvement.

Discussion. Petrous internal carotid artery aneurysms, although rare, can present with isolated cranial nerve palsies due to their mass effect on adjacent structures like the cavernous sinus. While abducens nerve palsy is typically associated with aneurysms in the cavernous segment, this case demonstrates that giant petrous aneurysms can also lead to similar symptoms. Early and accurate imaging is critical for diagnosis and timely intervention, which can prevent irreversible neurological damage. Recent studies show that endovascular treatment, particularly with flow-diverter stents, is effective in managing such aneurysms with minimal complications.

Conclusions. This case underscores the importance of considering giant internal carotid artery aneurysms in the differential diagnosis of cranial nerve palsy. Timely diagnosis and treatment, such as flow-diverter stent deployment, can lead to significant clinical improvement and prevent irreversible neurological deficits.

Keywords. Internal carotid artery aneurysm; abducens nerve palsy; endovascular embolization.

CROSSOVER FEMOROFEMOROPOPLITEAL BYPASS AS AN ALTERNATIVE APPROACH IN MULTISEGMENTAL ARTERIAL OCCLUSIONS: A CASE REPORT

Author: Patricija Griškaitė[1], 6th year
Supervisor: Artūras Mackevičius[1,2], M.D.
[1]*Vilnius University, Faculty of Medicine, Vilnius, Lithuania*
[2]*Republican Vilnius University Hospital, Vilnius, Lithuania*

Introduction. Iliofemoral artery occlusion resulting from peripheral artery disease leads to varying symptoms, from mild claudication to chronic limb-threatening ischemia, significantly impacting quality of life. In addition to the gold standard aortofemoral bypass, extra-anatomic bypass may be considered for patients with several comorbidities or those unsuitable for major anatomic arterial reconstruction. This case highlights an alternative surgical approach for a comorbid patient presenting with multisegmental occlusions of the right lower extremity arteries.

Case report. A 69-year-old male was admitted to the hospital with progressive claudication, numbness and night-time tenderness of the right leg. Two weeks earlier, ischemic discoloration appeared on the right fifth toe. The patient was diagnosed with chronic right leg ischemia, classified as Rutherford stage 5. Angiography revealed occlusion of the right common iliac - superficial femoral arterial segment, along with multiple subocclusions in the left common iliac - common femoral arterial segment. The decision was made to perform femorofemoral bypass from the left common femoral artery (CFA) to the right deep femoral artery (DFA) and femoropopliteal bypass from the prosthesis to the right popliteal artery (PA) P1 segment. Post- surgery, Doppler ultrasound detected systolo-diastolic flow in the left CFA, left DFA, right DFA and the right PA P1 segment.

Discussion. As presented in this case, crossover femorofemoropopliteal bypass is a practical approach for patients with ipsilateral iliac and femoropopliteal disease. Utilizing dual grafts ensures continuous perfusion if one occludes, with literature supporting favorable long-term patency and strong association with successful limb salvage.

Conclusions. The crossover femorofemoropopliteal bypass is an effective limb salvage option for select group of patients with concurrent ipsilateral iliac and femoropopliteal occlusive disease, particularly those for whom major aortic surgery is contraindicated due to cardiorespiratory comorbidities and whose disease severity limits conventional surgical or endovascular approaches.

Keywords. Crossover Femorofemoropopliteal bypass; Extra-anatomic bypass; Peripheral artery disease.

MULTIDISCIPLINARY APPROACH TO TREATING MULTISEGMENTAL THORACO-ABDOMINAL AORTIC ANEURYSM

Author: Justina Grigaitienė, 6th year, Augustė Aleknaitė[1], 6th year
Supervisor: Vilius Janušauskas[2], Assoc. Prof., M.D; Aleksejus Zorinas[2], Assoc. Prof., M.D.
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*

Introduction. Multisegmental thoracoabdominal aortic aneurysm (TAAA) abnormal dilation of the aorta, which includes dilatation of ascending aorta, aortic arch, and thoracoabdominal aneurysm. Some patients may have additional aortic and mitral valve disease which complicates further patient management. Management of multisegmental TAAA is highly challenging due to the extent of intervention.

Case report. A 59-year-old male presented to the hospital with persistent severe general weakness. Computed tomography angiography revealed chronic Type A dissection, ~59 mm ascending aortic aneurysm, ~40 mm descending aorta dilation, ~66 mm abdominal aortic aneurysm. Echocardiography demonstrated aortic and severe mitral valve insufficiencies. The stepwise approach was selected for patient treatment. The first step - open heart surgery: mitral valve replacement, aortic valve replacement, aortic root and arch replacement, classic elephant trunk. The procedure was performed under deep hypothermic circulatory arrest for 70 minutes at 18°C with selective cerebral perfusion. The second step - thoracoabdominal aortic stenting with thoracic endovascular aneurysm repair (TEVAR). The third step - branched endovascular repair (BEVAR).

Discussion. In this case, a three-step approach was taken to treat the aortic aneurysm, combining open heart surgery, TEVAR, and BEVAR. The management of multisegmental TAAA repair remains a worldwide challenge, however, the patient successfully underwent a major and complex aortic repair surgery, followed by stenting.

Conclusions. This case highlights the challenges of complex management of multisegmental TAAA, which required a three-staged repair performed by a multidisciplinary team. The case confirms that even in low flow centers management of multisegmental TAAA is feasible.

Keywords. Multisegmental thoraco-abdominal aortic aneurysm; elephant trunk; TEVAR; BEVAR

SPINAL CORD ISCHEMIA FOLLOWING COMPLEX AND EXTENSIVE ENDOVASCULAR AORTIC REPAIR: A MULTIFACTORIAL COMPLICATION

Author: Meilė Jucytė[1], 4th year
Supervisor: Rokas Girčius[2], M.D.
[1]*Vilnius University, Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius University hospital Santaros klinikos, Vilnius, Lithuania*

Introduction. A spinal cord ischemia (SCI) is one of the most adverse events following an endovascular aortic repair. This case highlights the interplay between preexisting risk factors, preoperative planning of a complex multi-level aortic and iliac endovascular treatment, procedural details and postoperative management decisions.

Case report. A 74-year-old woman underwent an elective endovascular procedure for a complex AAA. A preoperative CT scan revealed an infrarenal aortic aneurysm with a short neck and a complex anatomy followed by aneurysms in both common iliac arteries. Given a risk for an open repair by significant cardiovascular comorbidities, an endovascular approach was opted using a standard shelf-ready B-EVAR device descending from Th10 followed by a complete set of a bifurcated EVAR and an extension of an iliac bifurcation device (IBD) on the right side. Postoperatively in the ICU, the patient developed an acute respiratory failure leading to a bradycardia and asystole following a successful resuscitation. However, a few hours later the patient noted a loss of partial sensation and strength of legs. Considering the history and a new clinical development, a spinal cord infarction was diagnosed.

Discussion. A patient with multiple risk factors underwent a complex and extensive endovascular aortic treatment following a cardiac arrest and subsequent hypotension in a non- specialised ICU. Despite successful resuscitation, a hypotensive event likely caused a critical decrease in MAP. The compound effect of preoperative and intraoperative risk factors made patient highly susceptible to a complication, and the hypotensive event was the ultimate factor in the development of a clinically relevant SCI.

Conclusions. SCI after an endovascular aortic repair is a multifactorial complication. Timely addressing all the factors and specialized post-op care can minimize the risk of SCI and improve patient outcomes.

Keywords. Spinal cord ischemia; endovascular aortic repair; complex abdominal aortic aneurysm.

E-POSTER SESSIONS
Session 1

Jury members:

- **Vidas Petrauskas**
- **Dovilė Kielaitė**

Speakers:

1. **Joris Ribikauskas, Gerda Smolskaitė,** Kaunas, Lithuania
2. **Greta Nekrasovaitė, Marius Janušauskas,** Kaunas, Lithuania
3. **Agnė Gudauskaitė,** Vilnius Lithuania
4. **Julia Łaskawiec,** Warsaw, Poland
5. **Kotryna Šimkūnaitė**, Kaunas, Lithuania
6. **Laurynas Šarkinas,** Vilnius, Lithuania
7. **Mateusz Malinowski, Aleksandra Lewczak,** Białystok, Poland
8. **Aleksandra Lewczak, Mateusz Malinowski,** Białystok, Poland
9. **Ugnė Kriščiūnaitė, Raminta Akelaitytė,** Kaunas, Lithuania
10. **Jovilė Gedmontaitė, Gintarė Deksnytė,** Vilnius, Lithuania

BLADDER RUPTURE AFTER ABDOMINAL TRAUMA: A CASE REPORT

Authors: Joris Ribikauskas[1], 5th year, Gerda Smolskaitė[1], 5th year
Supervisor: Paulius Lizdenis[2], Assoc. Prof. Dr., Algirdas Domarkas[2], Dr.
[1]Medical Academy, Faculty of Medicine, Lithuanian University of Health Sciences, Kaunas, Lithuania
[2]Department of Surgery, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania

Introduction. Bladder injuries resulting from trauma are rare but potentially life-threatening conditions that require timely recognition and management. They often occur in association with high-impact events such as motor vehicle accidents, falls from height, or penetrating injuries. This case report presents an instance of bladder perforation caused by penetrating trauma sustained during a sledding accident.

Case report. A 45-year-old woman presented with a penetrating bladder injury after sledding and hitting a bush. The wood branch as a foreign body entered through the left buttockthigh, perforating the bladder and m. rectus abdominis, and exited near the umbilicusnavel, without affecting the abdominal cavity, rectum, or uterus. Urgent abdominal and pelvic CT scan revealed a 1.9 cm diameter, 32 cm long hollow foreign body entering the proximal left thigh, perforating the posterior and anterior walls of the urinary bladder and m. rectus abdominis sinistra. An urgent laparotomy was performed, and the foreign body was removed, bladder perforations were repaired in two layers with urologist consultation, and a cystostomy was formed. Three drains were placed, and after post-operative care, the patient was discharged. One month later, the cystostomy was removed, and a temporary Foley catheter was inserted.

Discussion. The bladder trauma diagnosis can be challenging due to the variability in clinical presentation, ranging from hematuria and lower abdominal pain to signs of peritonitis or shock in severe cases. The aim is to underscore the importance of early detection and a multidisciplinary approach in achieving optimal patient recovery.

Conclusions. Bladder injuries, though rare, can occur even in low-impact events like sledding. Early diagnosis and swift surgical intervention, including foreign body removal, bladder repair, and cystostomy, led to a successful outcome. This case underscores the importance of a multidisciplinary approach for effective trauma management and recovery.

Keywords. Bladder perforation; penetrating bladder trauma; abdominal trauma; bladder repair.

MIMICKING OVARIAN CANCER: A CASE OF PERITONEAL TUBERCULOSIS WITH ELEVATED OVARIAN TUMOR MARKERS AND CARCINOMATOSIS-LIKE PRESENTATION

Author: Greta Nekrasovaitė[1], 6th year, Marius Janušauskas[1] 4th year
Supervisor: Saulius Paškauskas MD, Prof.[2]
[1]*Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*Lithuanian University of Health Sciences Kaunas Clinics, Kaunas, Lithuania*

Introduction. Peritoneal tuberculosis (TB) is rare an extrapulmonary form of TB that affects the peritoneal cavity, including omentum, intestines, liver, spleen, and female genital tract. Due to overlapping features, it is often misdiagnosed as ovarian cancer, particularly in cases with peritoneal carcinomatosis-like findings, ascites, and elevated tumor markers such as CA-125. This misdiagnosis leads to unnecessary laparotomies and treatment delays.

Case report. A 48-year-old female presented with increasing abdominal distension, dry cough, fever, vomiting, and diarrhea. Blood tests revealed CRP 240 mg/L, hemoglobin 104 g/L, platelets 444 × 10⁹/L, NT-proBNP 2310 ng/L, and CA-125 694.9 U/mL. CT scans showed bilateral pleuritis, ascites, suspected liver metastases, omental carcinomatosis, suspected ovarian neoplastic disease, and localized colon thickening. Colonoscopy showed normal mucosa. Ascitic and pleural fluid cytology revealed no malignant cells. During diagnostic laparoscopy taken biopsies from the uterine adnexa, peritoneum, and intestines revealed necrotizing granulomas and acid-fast bacteria, confirming disseminated tuberculosis. The patient was transferred for treatment.

Discussion. In patients with ascites and elevated CA-125 without ovarian enlargement, peritoneal TB should be considered, with advanced ovarian cancer or peritoneal cancer as a differential. In India, 26 patients initially diagnosed with ovarian cancer were later confirmed to have peritoneal TB. Both conditions can present with elevated CA-125 and ascites. Studies show TB can have CA-125 levels as high as 564.95 U/mL. Ascitic fluid ADA, PCR, and PET-CT may help differentiate these conditions. Laparoscopy with biopsy remains the gold standard for distinguishing between peritoneal tuberculosis, carcinomatosis, and advanced ovarian or peritoneal cancer.

Conclusions. Peritoneal tuberculosis should be considered in patients with TB risk factors, weight loss, and systemic symptoms. A multimodal approach with imaging, biomarkers, and histopathology is crucial to prevent misdiagnosis and ensure proper management.

Keywords. Peritoneal tuberculosis; ovarian cancer; mimicry

A CASE REPORT OF MESENTERIC CYSTIC LYMPHANGIOMA WITH MULTIPLE ABDOMINAL ORGANS GRANULOMAS

Author: Agnė Gudauskaitė[1], 5th year
Supervisors: Vytautas Bilius[2], M.D.; Jelena Rascon[3], M.D., Prof.; Arūnas Strumila[4], M.D.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Center of Excellence for Rare Kidney Diseases and Genitourinary System Malformations (Pediatric), Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*
[3]*Center of Excellence for Primary and Acquired Immunodeficiencies in Children, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*
[4]*Center of Excellence for Congenital Developmental Anomalies, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*

Introduction. Mesenteric cystic lymphangioma is a rare, indolent intra-abdominal mass, primarily arising in the small bowel mesentery, with less frequent involvement of the omentum, mesocolon, and retroperitoneum. These anomalies stem from lymphatic malformations of uncertain etiology and predominantly affect males, with a documented maleto-female ratio of 5:2. This case report presents an unusual instance of mesenteric cystic lymphangioma accompanied by multiple granulomas affecting abdominal organs, discovered intraoperatively.

Case report. A 4-year-old boy was referred to pediatric urologists due to an enlarged urinary bladder. Abdominal ultrasound revealed a normal bladder but identified a large cystic mass in the small-bowel mesentery. Further diagnostic tests were performed, and the cyst was surgically excised. Histopathological examination confirmed the diagnosis of mesenteric cystic lymphangioma. In addition, multiple granulomas affecting abdominal organs were detected during surgery, prompting the collection of biopsies. Based on the patient‘s clinical history, disease progression, and laboratory findings, a diagnosis of combined immunodeficiency was established, potentially triggered by a rubella vaccine or a newly acquired condition.

Discussion. Mesenteric cystic lymphangioma is a benign anomaly, occurring in approximately 1 in 250,000 cases. It predominantly affects pediatric patients, often asymptomatically, with ultrasound typically detecting a painless, soft, mobile mass in 58% of cases. The atypical presence of abdominal granulomas suggests immune dysfunction, potentially linked to rubella infection or vaccine-derived rubella in immunocompromised patients, indicating a possible immune defect that facilitated viral persistence and an aberrant immune response in this case.

Conclusions. Mesenteric cystic lymphangiomas are intra-abdominal cystic tumors predominantly affecting infants and young children. Complete surgical excision remains the most effective treatment strategy to prevent recurrence and ensure an uneventful postoperative recovery. This case highlights the importance of considering immunodeficiency disorders in patients presenting with atypical findings, such as granulomas in multiple abdominal organs.

Keywords. Mesenteric cystic lymphangioma; abdominal granulomas; immunodeficiency; rubella virus.

MANAGEMENT OF AN UNUSUALLY LARGE VULVAR HEMATOMA FOLLOWING A TRAUMA TO THE PERINEUM: A CASE REPORT

Author: Julia Łaskawiec[1], 4th year
Supervisor: Arkadiusz Kowalczyk[1,2], MD PhD
[1]*Department of Descriptive and Clinical Anatomy, Medical University of Warsaw, Warsaw, Poland*
[2]*Pediatric Surgery and Urology Ward with Burn Unit, Prof. Jan Bogdanowicz Children's Hospital, Warsaw, Poland*

Introduction. Trauma remains one of the most common causes of hospitalization in pediatric population. Straddle injury may result in serious damage of the perineal region. Following case report discusses the procedural challenges and management of trauma to the perineum among female pediatric patients. Guidelines concerning perineal region management will be assessed.

Case report. A 13-year-old female patient presented to the emergency department with a massive hematoma of the left labia majora following a straddle injury. Management was performed in an operating room under general anesthesia. Revision of the vulva was followed by an attempt at urinary catheterization, during which spontaneous evacuation of the hematoma occurred through a laceration in the vaginal vestibule. Revision of the site resulted in discovery of multiple clots and a tear to the left side of the vagina. Following a successful catheterization, the wound was rinsed and closed using a dissolvable suture. To prevent further bleeding the vagina was packed with aseptic gauze. Recovery in the hospital was uneventful. Catheter was removed in fifth postoperative day. The patient was discharged home on the same day.

Discussion. Although straddle injuries seem to be recognized in the existing literature there are no official guidelines on management of such trauma. General recommendations present in the literature do not consider drainage of the hematoma necessary, however in this case its spontaneous voiding did not cause any complications. There are no firm recommendations on the antibiotic therapy, length of hospital stay nor urinary catheterization following a potential drainage. Notably the importance of evaluation of potential child abuse involvement seems to be recognized and highlighted.

Conclusions. Accurate management of straddle injuries poses significant challenge involving multiple aspects of patient care such as psychological trauma, assessment of the extent of the injury and potential benefits of surgical intervention.

Keywords. vulvar hematoma; straddle injury

POSTOPERATIVE CHALLENGES IN A NEONATE WITH SACROCOCCYGEAL TERATOMA: A CASE REPORT

Author: Kotryna Šimkūnaitė[1], 4th year
Supervisor: Ugnė Krunkaitytė[2], M.D., Prof. Aušra Lukošiūtė-Urbonienė[2], M.D., PhD.
[1]*Faculty of Medicine, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*Department of Pediatric Surgery, Lithuanian University of Health Sciences, Kaunas, Lithuania*

Introduction. Sacrococcygeal teratoma (SCT) is a rare embryonal tumor with an incidence of 1 in 35000–40000 live births. While most SCTs are benign, large tumors pose significant perinatal and postoperative challenges. We present a case of a neonate with a large SCT, emphasizing postoperative complications following surgical resection.

Case report. A female neonate (BW: 3.88 kg) was delivered via cesarean section at 38 weeks of gestation with a prenatally diagnosed sacrococcygeal mass (9.6×9.2×7 cm). Postnatal MRI confirmed a type II SCT with presacral and intrapelvic extension. On the fourth day, the newborn underwent surgery for excision of the 10 cm teratoma and partial sacrum resection. The defect was reconstructed using perineal muscle and skin flaps. Histopathology confirmed a mature cystic teratoma. On the 5 th post-op day, wound infection and dehiscence developed due to contamination from yet inadequate control of bowel movements. A wound culture tested positive for E. coli, therefore meropenem was initiated. The patient underwent wound revision, during which no rectal fistula was identified. Finally, wound eventually healed with continuous fusidic acid cream dressing changes, leading to infection resolution. After six months, the patient presented for a follow-up. To this day, the child has full control of the lower limbs and demonstrates voluntary control over bowel and bladder functions.

Discussion. Large SCTs require radical surgical excision, often including coccygectomy and/or partial sacrectomy to reduce risk of recurrence. However, extensive resections increase the risk of wound healing complications, functional impairments. Early recognition and prompt wound management, infection control, and antibiotic therapy are crucial to prevent further morbidity.

Conclusions. This case highlights the challenges of managing large sacrococcygeal teratomas, particularly the risk of postoperative wound complications. Prompt identification and intervention for infection and dehiscence are essential for optimal outcomes.

Keywords. Sacrococcygeal teratoma; Case report; Postoperative infection.

MIGRATED COIL AFTER EMBOLIZATION OF A SPLENIC PSEUDOANEURYSM: A CASE REPORT

Author: Laurynas Šarkinas[1], 5th year
Supervisor: Mindaugas Kvietkauskas[2], M.D., PhD.
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*Center of Abdominal and Oncological Surgery, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*

Introduction. Coil migration from a visceral artery pseudoaneurysm is a rare complication of transarterial embolization (TAE) with only fifteen cases reported in the literature to date. We present a case of coil migration to the stomach following TAE for rupture and bleeding of splenic artery pseudoaneurysms (PSA).

Case report. A 65-year-old male patient with a history of pancreatitis and gastric varices, treated with necrosectomy and sclerotherapy, respectively, was admitted to the hospital due to intra-abdominal bleeding from a ruptured PSA. The pseudoaneurysm was diagnosed through selective angiography and was simultaneously embolized using a coil and N-butyl cyanoacrylate glue. The patient recovered well and was discharged. One year later, a follow-up esophagogastroduodenoscopy was performed due to a history of sclerotherapy for gastric varices, revealing partially migrated metallic coils in the stomach. A CT scan was performed, and a multidisciplinary discussion was held among the surgical, gastrointestinal, and interventional radiology teams. Although endoscopic removal of the coils was initially considered, it was decided to leave the coils in place and discharge the patient with close outpatient follow-up, as the patient remained hemodynamically stable and asymptomatic.

Discussion. In this case, a conservative observational approach was chosen to mitigate bleeding risks associated with endoscopic coil removal, though it leaves the risk of stomach or bowel perforation. As this is a very rare complication, the optimal management approach is limited. Single case reports highlight successful outcomes with both endoscopic and open surgical removal, including the use of percutaneous or endoscopic cholangiography, in instances of coils migrating into the common bile duct.

Conclusions. The optimal management of the rare complication of coil migration into the gastrointestinal tract following TAE remains uncertain. This case highlights a conservative treatment approach with close follow-up as a viable option.

Keywords. Embolization; Splenic artery pseudoaneurysm; Coil migration.

SURGICAL MANAGEMENT OF A GIANT GOITER: A CASE STUDY OF A 55-YEAR-OLD MALE

Author: Mateusz Malinowski[1], 5th year, Aleksandra Lewczak[2], 5th year
Supervisor: Kamil Waczyński[3], M.D., Mikołaj Czerniawski[4], M.D.
[1]Student Scientific Association, 1st Department of General and Endocrine Surgery, Medical University of Białystok, Białystok, Poland
[2]Student Scientific Association, 1st Department of General and Endocrine Surgery, Medical University of Białystok, Białystok, Poland
[3]1 st Department of General and Endocrine Surgery, Medical University of Białystok , Białystok, Poland
[4]1 st Department of General and Endocrine Surgery, Medical University of Białystok , Białystok, Poland

Introduction. Giant thyroid goiters present a rare yet significant surgical challenge due to distorted neck anatomy, which complicates intubation and increases the risk of recurrent laryngeal nerve injury and parathyroid damage. This case report highlights effective surgical management utilizing advanced monitoring techniques.

Case presentation. A 55-year-old male presented with a giant thyroid goiter present since childhood, which had significantly enlarged over four years. Due to its large size (total volume 576,88 ml), the patient reported breathing difficulties and reduced quality of life. Imaging confirmed massive thyroid enlargement, asymmetric tracheal displacement with luminal narrowing, and cervical compression. Tracheal narrowing increased the risk of difficult intubation, necessitated collaboration between surgeons and anesthesiologists. A total thyroidectomy was planned, with videolaryngoscopy and an intubation guide used to address the challenging anatomy. Intraoperative neuromonitoring of the recurrent laryngeal and vagus nerves, along with surgical loupes, facilitated enhanced visualization. The procedure was completed without complications, and the patient was discharged in good condition, without hoarseness or other deficits.

Discussion. Giant goiters occur in 6-20% of thyroid nodular disease cases, with size not always correlating with symptom severity. Key surgical challenges include difficult intubation, recurrent laryngeal nerve injury, and parathyroid preservation. Neuromonitoring significantly reduces the risk of nerve damage, while surgical loupes aid in identifying anatomical structures, preventing postoperative complications such as hypocalcemia.

Conclusions. Total thyroidectomy for giant goiters is effective when precision and careful planning are employed. The use of neuromonitoring and surgical loupes minimizes risks and improves outcomes, underscoring the value of modern technologies in endocrine surgery. This case highlights the importance of integrating advanced techniques to address complex surgical challenges effectively.

Keywords. Giant goiter, thyroid, resection, intubation, neuromonitoring.

A CASE OF RECURRENT FOREIGN OBJECT INGESTION AND SELF-EMBEDDING: A MANAGEMENT CHALLENGE

Author: Aleksandra Lewczak[1], 5th year, Mateusz Malinowski[2], 5th year
Supervisor: Kamil Waczyński[3], M.D.
[1]Student Scientific Association, 1st Department of General and Endocrine Surgery, Medical University of Białystok, Białystok, Poland
[2]Student Scientific Association, 1st Department of General and Endocrine Surgery, Medical University of Białystok, Białystok, Poland
[3]1st Department of General and Endocrine Surgery, Medical University of Białystok, Białystok, Poland

Introduction. The deliberate insertion of foreign bodies into the body can occur through self-ingestion or self-embedding, leading to diverse and complex clinical presentations. These rare behaviors are often associated with psychiatric disorders and cognitive disabilities. The integration of surgical and psychiatric expertise, along with the interpretation of routine imaging studies, forms the foundation for accurate diagnosis and treatment of patients suspected of harboring foreign bodies.

Case report. A 35-year-old male with a history of mild intellectual disability, Recklinghausen disease, epilepsy and hypothyroidism repeatedly engaged in foreign object ingestion and subdermal insertion of objects, including chains, nails, needles, batteries, and glass marbles. Over the past 10 years, the patient had undergone multiple surgical interventions for the removal of embedded objects from the subcutaneous tissue of the forearms and endoscopic procedures to retrieve ingested items. After one hospitalization, the absence of routine post-hospitalization
imaging surveillance raised concerns regarding the effectiveness of the surgical intervention. In one case, laparotomy was necessary due to suspected intestinal perforation. Despite psychiatric interventions, including behavioral therapy and medications, the patient persisted in self-injurious behaviors, necessitating continued surgical management and careful monitoring.

Discussion. The surgical management of recurrent foreign object ingestion and self-embedding in intellectually disabled patients poses significant life-threatening risks, including bowel perforation, infection, and peritoneal adhesions in case of laparotomy. Pre- and postoperative imaging is essential for accurately identifying and confirming the complete removal of foreign bodies. A multidisciplinary approach involving surgeons, gastroenterologists, and psychiatrists was crucial in this complex case.

Conclusions. Recurrent self-embedding and ingestion of foreign bodies requires acute clinical management and long-term psychiatric intervention. Preventive measures and thorough imaging are essential to confirm complete removal, minimize complications, and prevent recurrence. A multidisciplinary approach is key to managing these complex cases effectively.

Keywords. Foreign body ingestions, mental disorders, surgical-psychiatric cooperation

APPENDIX – ALWAYS THE BAD GUY: INTUSSUSCEPTION OF THE APPENDIX SECONDARY TO THE APPENDICEAL ADENOMA, A CASE REPORT

Author: Ugnė Kriščiūnaitė[1], Raminta Akelaitytė[2], 6th year
Supervisor: Henrikas Paužas[3], M.D., PhD
[1,2]Lithuanian University of Health Sciences, Kaunas, Lithuania
[3]LSMU Kaunas Clinics, Kaunas, Lithuania

Introduction. Intussusception of the appendix is a rare condition that poses a diagnostic challenge for surgeons. Due to the limited literature, which consists mainly of case reports, the presentation, diagnosis, and treatment remain uncertain.

Case report. A 61-year-old woman presented with pain in the right abdomen. Over a year ago, she underwent a left hemicolectomy for sigmoid colon adenocarcinoma (pT2 N0 Mx LVI0 R0, G2). Physical examination showed stable vital signs and a non-tender abdomen. Abdominal ultrasound and chest X-ray were unremarkable. Colonoscopy showed intussusception of the appendix. Appendectomy was planned. The surgery was uneventful, and the excised tissue was sent for pathohistological examination, which revealed a tubulovillous adenoma of the appendix. The patient's postoperative condition was stable.

Discussion. Intussusception occurs when a segment of the bowel and its mesenteric fold telescopes into an adjacent bowel section, causing ischemia. Intussusceptions are rare in adults, but when present it is likely due to the lesion within lumen, such as adenoma in this case. Appendiceal intussusception often mimics the symptoms of acute appendicitis but can have a chronic presentation as well. This condition is challenging to diagnose, and most cases are found during surgery. However, there has been a shift toward preoperative diagnosis in more recent literature. Endoscopy is not a first-choice diagnostic tool because intussuscepted appendix can be mistaken for a polyp. Appendectomy is the standard treatment.

Conclusions. Appendiceal intussusception secondary to adenoma is a very rare, challenging condition. We would like to emphasize the importance of identifying the underlying cause of intussusception early to ensure timely treatment and prevent malignancy from becoming inoperable.

Keywords. Appendiceal intussusception; Appendiceal adenoma;

BOWEL OBSTRUCTION DUE TO A GALL BLADDER STONE: A CASE REPORT

Author: Jovilė Gedmontaitė[1], Gintarė Deksnytė[1], 6th year
Supervisor: Gintaras Varanauskas [2] M.D
[1] Faculty of Medicine, Lithuanian University of Health Sciences, Kaunas, Lithuania
[2] Department of Surgery, Republican Vilnius University Hospital, Vilnius, Lithuania

Introduction. Gallstone ileus is a rare but serious complication of cholelithiasis, causing mechanical bowel obstruction when a gallstone enters the gastrointestinal tract. It is more common in elderly women and presents with abdominal pain, nausea, constipation, and signs of small bowel obstruction. Diagnosis requires Rigler's Triad: pneumobilia, ectopic gallstone, and intestinal obstruction. Complications may include bowel ischemia, sepsis or perforation. A proper diagnosis and emergency surgery are always necessary.

Case report. An 87-year-old woman was admitted with severe nausea and emesis, which had been bothering her for 2 weeks. Examination revealed a soft, tender abdomen without peritonitis sign. Blood tests showed elevated CRP (166 mg/L). Abdominal X-ray was inconclusive, but CT scan identified a cholecystoduodenal fistula, gallbladder inflammation, and partial jejunal obstruction by a migrated gallstone. Emergency laparotomy with enterotomy was performed to remove the stone, leaving the fistula intact to avoid duodenal injury. The patient had an uneventful postoperative recovery.
Discussion. Gallstone ileus is a rare but serious complication of cholelithiasis, typically affecting elderly patients. It occurs when a gallstone erodes through the gallbladder wall, forming a bilioenteric fistula, and subsequently migrates into the gastrointestinal tract, causing mechanical obstruction. In this case, the patient presented with a cholecystoduodenal fistula and small bowel obstruction secondary to an impacted gallstone in the jejunum.

Conclusions. This case highlights the importance of early recognition and fast surgical intervention in gallstone ileus, particularly in elderly patients, to ensure favorable outcomes.

Keywords. Gallstone ileus; enterotomy; cholecystoduodenal fistula

E-POSTER SESSIONS
Session 2

Jury members:

- **Austėja Račytė**
- **Dominykas Budrys**

Speakers:

1. **Akvilė Drachnerytė,** Vilnius, Lithuania
2. **Iris Tõnismaa,** Tartu, Estonia
3. **Dora Klobučar, Maja Kranjčec**, Rijeka, Croatia
4. **Darijus Astrauskas,** Kaunas, Lithuania
5. **Rokas Venclovas, Justina Baltrūnaitė,** Vilnius, Lithuania
6. **Alicija Krasavceva,** Vilnius, Lithuania
7. **Nikolina Kovač,** Rijeka, Croatia
8. **Edita Družaitė, Matas Šimkus**, Kaunas, Lithuania
9. **Justina Grigaitiene,** Vilnius, Lithuania
10. **Alise Kitija Rūtiņa,** Riga, Latvia
11. **Greta Zaburaitė,** Vilnius, Lithuania
12. **Gerda Grigucevičiūtė,** Vilnius, Lithuania
13. **Matas Kuncė,** Vilnius, Lithuania

Vilnius Surgical Symposium for Medical Students

BILATERAL ADULT HIP DYSPLASIA: FROM ACETABULAR LABRAL TEAR TO TOTAL HIP ARTHROPLASTY. A CASE REPORT

Author: Akvilė Drachnerytė[1], 6th year
Supervisor: Giedrius Petryla[2], M.D., PhD
[1]*Vilnius University, Vilnius, Lithuania*
[2]*Vilnius University, The Republican Vilnius University Hospital, Vilnius, Lithuania*

Introduction. Hip dysplasia is a condition in which various developmental pathologies cause hip joint instability. This leads to mechanical stress of the cartilage and acetabular labrum, resulting in rapid degeneration of hip joint. Treatment strategies depend on joint condition: periacetabular osteotomy (PAO) is chosen for joint preservation and total hip arthroplasty is indicated for advanced osteoarthritis.

Case report. A 43 year old woman was complaining of left hip pain for 6 months. Acetabular labral tear was diagnosed and then repaired arthroscopically. After the procedure the pain subsided for a month but then recurred suddenly. The patient was evaluated at The Republican Vilnius University Hospital and bilateral hip dysplasia was diagnosed after pelvic X-ray. Left hip PAO was performed, however no clinical improvement was observed for a year. Follow-up X-ray was performed and left hip joint was diagnosed with arthrosis. Meanwhile, patient developed pain in the right hip, which led to right hip PAO, which resulted in significant clinical improvement. A year after the second surgery, total hip arthroplasty was performed for the left hip.

Discussion. Main treatment goal is managing underlying causes. In this case, hip dysplasia increased mechanical stress on acetabular labrum and caused the labral tear. Arthroscopic repair was ineffective because the primary cause wasn't resolved. Arthroscopy before PAO isn't recommended as it causes more laxity in joint capsule and as a result – more instability. In most cases arthroscopy after performing PAO isn't indicated. Evaluating joint condition via X-ray prior to PAO is crucial. Performing left hip PAO was risky. In comparison right hip was treated with a correct strategy.

Conclusions. Treating underlying causes such as dysplastic acetabulum and femoral head coverage is essential. Arthroscopy increases hip joint instability. Preoperative X-ray evaluation for signs of injury is extremely important.

Keywords: Hip Dysplasia; Periacetabular osteotomy; Arthroplasty; Arthroscopy;

REVERSE TOTAL SHOULDER ARTHROPLASTY FOR PROXIMAL HUMERUS FRACTURE WITH THE DEVELOPMENT OF PSEUDOARTHROSIS. CASE REPORT

Author: Iris Tõnismaa[1], 1st year
Supervisor: Alo Rull[2], M.D.
[1]*Tartu University, Tartu, Estonia*
[2]*Tartu University Hospital, Tartu, Estonia*

Introduction: Pseudoarthrosis of the proximal humerus is an uncommon complication of a fracture. Some factors that might contribute to its development are inadequate stability, infection, poor blood flow or comorbidities. This abstract presents a case of reverse total shoulder arthroplasty in a patient with a previous proximal humerus fracture and the development of pseudoarthrosis.

Case report: A 72-year-old female with medical history of metastasized intestinal adenocarcinoma, hypertonia, COPD, mixed hyperlipidemia and nonrheumatic aortic valve insufficiency presented to orthopedics with right shoulder pain. The patient has also smoked 35 pack-years. She had sustained a proximal comminuted displaced intra-articular humerus fracture and a glenoid fracture with minimal displacement from a fall down the stairs a year ago. Osteosynthesis with an ALPS (anatomic locking proximal humerus system) plate was used for treatment. Skudexa 75/25 mg was prescribed for pain management. A month after the operation migration of the plate and a distal screw fracture was detected in the radiograph. The plate was removed with no complications. One year later a pseudoarthrosis had developed as well as osteoporosis. Alendronic acid + cholecalciferol 70 mg was prescribed to treat it. A reverse shoulder arthroplasty was chosen as the optimal treatment for thepseudoarthrosis. One week post op, no complications had arisen.

Discussion: The factors that might have contributed to a failed osteosynthesis are inadequate fixation or poor surgical technique, smoking, previous chemotherapy and comminution. A revision ostheosynthesis for pseudoarthrosis treatment was not considered because of her osteoporosis and inadequate rotator cuff function, for the same reasons hemiarthroplasty was insufficient. Total reverse shoulder arthroplasty was the only option to achieve proper function.

Conclusion: Given her comorbidities and old age a reverse total shoulder arthroplasty was the best course of treatment. To this date it has not caused any complications for the patient.

Keywords: arthroplasty; osteosynthesis; osteoporosis; pseudoarthrosis

COMPLETE RESTAURATION OF CHRONICALLY RUPTURED ACHILLES TENDON TREATED WITH FLEXOR HALLUCIS LONGUS TENDON TRANSFER

Authors: Dora Klobučar[1], Maja Kranjčec[1], 5th year
Supervisor: Assoc. Prof. Hrvoje Klobučar[2], M.D., PhD
[1]*School of Medicine, University of Rijeka, Croatia*
[2]*Akromion, Special Hospital for Orthopaedics and Traumatology, Zagreb, Croatia*

Introduction. A chronic Achilles tendon rupture is defined as a rupture that occurs more than 4-6 weeks after the initial injury. It often results from neglected acute rupture, failed primary repairs or severe tendinopathy leading to progressive degeneration of the tendon. There are several corrective techniques from which endoscopic tendon transfer offers better Achilles tendon biomechanics and faster healing.

Case report. A 56-year-old insulin-dependent patient with chronic diabetes presented with a chronic degenerative rupture of the Achilles tendon (AT) following multiple microtraumas. This resulted in progressive AT weakening, an inability to perform a tiptoe raise, and gait impairment. The patient was evaluated eight months after symptoms onset. Clinical examination revealed positive Thompson and Matles tests, while MRI confirmed a degenerative AT tear. Surgical management involved an endoscopic flexor hallucis longus (FHL) tendon transfer to the calcaneal tuberosity. Postoperatively, the patient was immobilized in a walker boot for six weeks and Achilles tendon strengthening exercises were encouraged. One year postoperatively, a follow-up MRI demonstrated a complete AT restoration. Functional outcomes were assessed using the Foot and Ankle Disability Index (FADI) and the American Orthopaedic Foot & Ankle Society (AOFAS) scores preoperatively and six months post-surgery.

Discussion. Endoscopic FHL tendon transfer is a well-known and reliable method for the treatment of chronic Achilles tendon ruptures. This minimally invasive approach is especially appropriate for diabetic patients with possible wound healing problems. This method allows quick recovery and full weight bearing. With time, the FHL tendon remodels, enlarges and helps the healing of AT rupture.

Conclusions. One year after surgery, MRI confirms complete AT restauration after chronic tendon rupture and treatment with endoscopic FHL tendon transfer. Studies show FHL transfer rarely causes significant strength or hallux function loss, as other muscles compensate.

Keywords. Chronic Achilles tendon rupture, endoscopic flexor hallucis longus tendon transfer

SURGICAL MANAGEMENT OF ACETABULAR FRACTURE WITH FEMORAL HEAD MIGRATION INTO THE PELVIC CAVITY: A CASE REPORT

Author: Darijus Astrauskas[1], 6th year
Supervisors: Justė Ramonaitė[2], MD, Deimantas Masaitis[2], MD
[1]*Faculty of Medicine, Lithuanian University of Health Sciences, Kaunas, Lithuania*
[2]*The Department of Orthopaedics and Traumatology, Lithuanian University of Health Sciences Kaunas Clinics*

Introduction. Acetabular fractures account for 3-6% of all pelvic injuries, often resulting from high-energy trauma such as falls or motor vehicle accidents. These fractures are clinically significant due to their association with femoral head displacement, which occurs in 15-20% of cases. Femoral head must be anatomically reduced as soon as possible in order to decrease high risk of joint misalignment and post-traumatic osteoarthritis. Restoring acetabular congruity is essential for favourable patient outcomes, as it directly correlates with hip joint longevity, however, this demands careful management of intraarticular fragments.

Case report. A 55-year-old female patient was transferred from district hospital to LUHS after a simple fall, sustaining a right acetabular fracture with femoral head migration into the pelvic cavity. Imaging revealed a fracture of the posterior acetabular wall with fragment impaction, cranial displacement of the acetabular roof, and intraabdominal fluid accumulation. Skeletal traction was applied before surgery. Open reduction and internal fixation was performed via the Modified Stoppa approach under fluoroscopic guidance to preserve acetabular alignment. Osteosynthesis was accomplished with plates and screws. The procedure successfully restored anatomical alignment without intraoperative complications. Postoperative stability and nerve function were preserved.

Discussion. The Modified Stoppa approach, utilized in this case, allows direct management of multifragmentary acetabular fractures with impaction, essential for anatomical reduction and hip joint longevity. Recent studies confirm the effectiveness of this technique for complex fractures, showing better visualisation of the posterior column and a shorter operative time compared to the traditional ilioinguinal approach. Despite successful reduction, post-traumatic osteoarthritis remains prevalent, requiring long-term supervision.

Conclusions. This case highlights the Modified Stoppa approach's value in addressing multifragmentary fractures with impaction, emphasizing anatomical restoration to delay joint degeneration. Regular follow-up remains vital to detect early osteoarthritis and preserve joint function.

Keywords. Acetabular fracture; Femoral head migration; Modified Stoppa approach.

CUSTOM ANGLED BLADE PLATE FIXATION FOR A FEMORAL FRACTURE IN PAGET'S DISEASE: A CASE REPORT

Author: Rokas Venclovas[1], 6th year, Justina Baltrūnaitė[2], 6th year
Supervisor: Andrius Sadauskas[3], M.D.
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*Faculty of Medicine, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania*
[3]*Vilnius University Hospital Santaros Clinics, Center of Orthopaedic and Traumatology, Vilnius, Lithuania*

Introduction. Paget's disease of bone (PDB) is a metabolic disease characterized by boneremodeling, leading to deformities in one or multiple bones. Most commonly the pelvis, femur, and skull bones are affected. The incidence is 1–3% of individuals over 55 years old, with femoral involvement occurring in 25–35% of cases.

Case report. A 92-year-old female presented to the emergency department after a fall. She had been diagnosed with Paget's disease of the right femur 65 years ago, resulting in severe coxa vara (<80°), arch deformity, and cystic transformation with osteosclerosis. An X-ray confirmed an intertrochanteric proximal diaphyseal fracture of the right femur with dislocation. Considering the patient's comorbidities, age, and activity level, an initial conservative treatment plan was proposed. However, the patient categorically declined conservative management and requested surgical treatment. A multidisciplinary team opted for surgical intervention. Internal fixation was performed using a 95° angled blade plate (10 holes, 80 mm beak), custom-adjusted to the femoral deformity, along with eight cortical screws (50–54 mm) and an 80 mm spongious neck screw.

Discussion. Fractures are one of the most common PDB complications. With such femoral deformities it is a significant challenge in selecting an optimal fixation method for intertrochanteric fractures. Literature supports plate fixation for such fractures, however, it is associated with a high risk of nonunion (40%). In this case, a 95° angled blade plate was chosen to enhance mechanical stability.

Conclusions. The surgical management of femoral fractures in patients with PDB presents unique challenges due to severe bone deformities, compromised bone quality and individualized treatment planning.

Keywords. Paget's disease of bone; Femur; Fracture; Internal fixation.

NEURODEGENERATIVE MANIFESTATIONS OF DURAL ARTERIOVENOUS FISTULAS: A CASE OF DELIRIUM AND COGNITIVE DYSFUNCTION

Author: Alicija Krasavceva[1], 6th year
Supervisor: Audrius Širvinskas[2], M.D.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Department of Radiology, Republican Vilnius University Hospital, Vilnius, Lithuania*

Introduction. Dural arteriovenous fistulas are abnormal connections between dural arteries and venous structures, typically presenting with symptoms such as pulsatile tinnitus, headaches, and visual disturbances. While the risk of intracranial hemorrhage is well-recognized, increasing attention has been given to their association with cognitive impairments, including dementia and cognitive decline. Venous hypertension, a characteristic feature of dural arteriovenous fistulas, plays a significant role in these neurodegenerative symptoms. This case highlights the clinical
presentation of cognitive dysfunction and delirium in a patient with a left sigmoid sinus arteriovenous fistula.

Case report. A 79-year-old woman with a history of traumatic subdural hemorrhage presented with agitation, deficits in orientation and language, tremors, and developing delirium. Initial findings could not explain the altered consciousness. However, contrast-enhanced computed tomography scan and angiography identified a left sigmoid sinus dural arteriovenous fistula with retrograde venous drainage (Cognard Type III). The patient underwent endovascular transvenous embolization, occluding the venous pouch. Post-treatment imaging showed significant reduction in vasogenic edema, and the patient regained consciousness and responsiveness, although some cognitive impairments persisted.

Discussion. This case underscores the potential for dural arteriovenous fistulas, especially those with complex venous drainage, to cause progressive cognitive dysfunction, including deficits in orientation, language, and executive function. Previous studies have linked venous hypertension and cortical venous reflux to cognitive decline, with treatment often improving cognitive symptoms, though some deficits may remain. Early diagnosis and intervention are crucial for minimizing neurological deficits.

Conclusions. This case highlights the importance of considering dural arteriovenous fistulas in patients with unexplained cognitive impairments, particularly those with venous hypertension and complex angiographic features. Early intervention can significantly improve neurological outcomes, though some cognitive symptoms may persist. Further research is needed to explore the long-term impact of dural arteriovenous fistulas on cognitive health.

Keywords. Dural arteriovenous fistula; endovascular transvenous embolization.

SPLENIC ARTERY ANEURYSM IN PATIENT WITH DUNBAR SYNDROME: A MULTIDISCIPLINARY MANAGEMENT APPROACH

Author: Nikolina Kovač[1], 3rd year, Ivana Crkvenac[1], 4th year, Mirjam Majstorović[1], 4 th year
[1]University of Rijeka, The Faculty of Medicine, Rijeka, Croatia

Introduction: The splenic artery aneurysm is the most common of the visceral aneurysms. In this case, we describe a female patient with an incidental finding of a symptomatic aneurysm accompanied by Dunbar syndrome.

Case Report: A 45-year-old female patient presented to the ER with abdominal pain. The pain had started three days prior and worsened with movement. The patient denied any history of trauma and reported no nausea or vomiting. A CT scan of the abdomen and pelvis was performed, revealing vascular structure along the expected course of the splenic artery, inseparable from the artery itself. Further evaluation with CT aortography of the abdominal aorta confirmed a 25 mm aneurysm in the mid-to-distal segment of the splenic artery, with no signs of rupture. Additionally, imaging showed a narrowed celiac trunk, characteristic of compression by the median arcuate ligament. Based on diagnostic findings, the patient was diagnosed with Dunbar syndrome and a splenic artery aneurysm. Following a multidisciplinary team decision, embolization of the splenic artery was indicated via right femoral puncture. The post-procedural condition was stable. A Doppler ultrasound of the splenic artery confirmed normal blood flow with successful exclusion of the aneurysm.

Discussion: Dunbar syndrome is a rare condition in which the median arcuate ligament of the diaphragm compresses the celiac trunk, reducing blood flow through the celiac artery. As a compensatory mechanism, collateral arteries experience increased blood flow, which can lead to aneurysm formation. Cases where a splenic artery aneurysm develop secondarily to Dunbar syndrome are rare. In this case, we cannot determine whether these two clinical conditions have a causal association or coexist without direct pathological correlation.

Conclusion: The relationship between Dunbar syndrome and splenic artery aneurysm is an area of medicine that should be further explored to better understand their connection.

Keywords: Aneurysm, Splenic Artery; Abdomen Pain; Dunbar Syndrome; Embolization

SAMURAI CANNULATION IN ACUTE TYPE I AORTIC DISSECTION DIRECT TRUE LUMEN TECHNIQUE

Author: Edita Družaitė[1], 4th year, Matas Šimkus[1], 4th year
Supervisors: Dainius Karčiauskas[2,3], MD, Ph.D, Povilas Jakuška[2,3], Prof., MD, Ph.D,
[1]Faculty of Medicine, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania
[2]Department of Cardiac, Thoracic and Vascular Surgery, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania
[3]Institute of Cardiology, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania

Background and aim of the study. Arterial cannulation strategy in type I aortic dissection remains challenging, especially for hemodynamically unstable patients or dissection extending into the innominate artery. Herein, we provide overview of the steps of direct true lumen (DTL) cannulation technique.

Methods and materials. After median sternotomy and full heparinisation, two-stage venous return cannula is inserted into right atrium and left ventricular vent then introduced via right upper pulmonary vein. Ascending aorta is carefully mobilized and circumferentially dissected and two Mersilene tapes are passed around ascending aorta for later aortic line snaring. Patient is placed in a deep Tredelenburg position and then exsanguinated into cardiopulmonary bypass (CPB) venous reservoir to achieve systolic arterial pressure 20-30 mmHg (no pulse wave). Ascending aorta is completely transacted under direct vision in the area just above sinotubular junction and true lumen identified. Straight arterial cannula with low flow perfusion inserted into true lumen and snared gently with Mersilene tapes. Expeditious total hypothermic CPB with precooling priming solution initiated with antegrade flow into true lumen. Subsequently,
selective antegrade cardioplegia is performed through the coronary ostia. Pressure monitoring in both radial arteries and femoral artery with bilateral cerebral oxygen saturation measurement were used to identify intraoperative malperfusion.

Results. From April 2004 to September 2022, open DTL cannulation of the ascending aorta was performed in 185 patients. The true lumen was always identified, with no malperfusion-related complications. Late reoperations occurred due to early technical failures, including aortic root bleeding, ascending aorta rupture, and lumen obstruction by clots. The 30-day mortality rate was 21.6%, mainly after full arch surgery (58.3%), with multiple organ dysfunction syndrome as the leading cause. Permanent neurologic events occurred in 11.3% of patients.

Conclusions. Direct ascending aorta true lumen cannulation is fast, safe and reproducible technique to provide adequate central antegrade flow through the true aortic lumen within 2 min of circulatory arrest.

Keywords. Cannulation

PREGNANT WOMAN WITH BLUNT CARDIAC RUPTURE

Author: Justina Grigaitiene[1], 6th year
Supervisor: Andrej Podkopajev[2] M.D.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*

Introduction. Blunt cardiac injury (BCI) refers to damage to the heart typically resulting from high-impact trauma, such as vehicle accidents, motorcycle crashes, and significant falls. Formerly known as "cardiac contusion," BCI includes a wide range of myocardial injuries, from mild, symptom-free conditions to severe, potentially fatal cardiac ruptures. Common symptoms include chest pain, shortness of breath, and arrhythmias, though many patients may be asymptomatic at first. Treatment aims to manage arrhythmias, offer supportive care, and, surgical intervention may be required.

Case report. A 31-year-old female presented to the hospital after a vehicle accident. The patient was 17 weeks pregnant and lost her consciousness several times. 12 hours later, after the first hospital submission, the CT scan detected an active extravasation to pericardial cavity, and cardiac tamponade was suspected. Pericardium and left ventricle revised through the left thoracotomy and no active extravasation was found. Hemodynamically stable patient transferred to ICU (intensive care unit). An hour later the patient suffered cardiac arrest; resuscitation was initiated, and lifesaving sternotomy performed. Active extravasation from left ventricle identified and sutured on cardiopulmonary bypass.

Discussion. This case highlights the challenges of managing cardiac injuries in which some of them could be asymptomatic at first hours. Comprehensive physical exams, supportive care, and quick decisions to perform urgent surgery are essential for optimal patient outcomes and survival. Different methods of surgery or their combination could be needed.

Conclusions. This report presents a case of successful surgical treatment of blunt cardiac rupture despite delayed diagnosis.

Keywords: blunt cardiac rupture; cardiac tamponade; pregnancy.

POSTOPERATIVE RECOVERY AND FOLLOW-UP VISITS IN PATIENTS WITH CHOLESTEATOMA: A DAY CARE CLINIC PERSPECTIVE

Author: Alise Kitija Rūtiņa[1], 6th year
Supervisor: M.D Elīna Eliasa Vīgante[1,2]
[1]*University of Latvia, Riga, Latvia*
[2]*HEADLINE Clinic, Riga, Latvia*

Background and aim of the study. Chronic otitis media (COM) with cholesteatoma can lead to hearing loss and bone destruction, often requiring surgical intervention. This surgery can be performed in a day-care setting. This retrospective study evaluates the effectiveness of day-care surgery for COM with cholesteatoma, specifically examining postoperative antibiotic use, treatment duration, and postoperative monitoring requirements compared to patients undergoing surgery for COM without cholesteatoma.

Methods and materials. Retrospectively analyzed data from 95 adult patients who underwent middle ear surgery at the private clinic "Headline" between September 1,2019 and September 1,2024. The cohort included 30 patients with COM and cholesteatoma and 65 patients with COM without cholesteatoma.

Results. Postoperative antibiotic use was low overall. In the early postoperative period, only one patient in each group (3.33% cholesteatoma, 1.54% non-cholesteatoma) required antibiotics. In the late postoperative period, antibiotics were needed by 3 (10%) cholesteatoma and 9 (13.84%) non-cholesteatoma patients. Subjective hearing improvement was reported by 12 (40%) cholesteatoma patients and 37 (56.9%) non-cholesteatoma patients. The median number of postoperative visits was higher for the cholesteatoma group (5, IQR:4–7) than the non-cholesteatoma group (4, IQR:3–6). The median postoperative treatment duration was similar between the groups: 59 days (IQR:37–90) for cholesteatoma and 60 (IQR:32–90) for non-cholesteatoma patients. Three (10%) cholesteatoma patients experienced complications: wound infection, facial nerve paresis, and dizziness.

Conclusions. Day-care surgery for COM, including cases with cholesteatoma, can be performed effectively, as evidenced by the low postoperative antibiotic use and complication rate. Although median treatment duration was similar, cholesteatoma patients required more frequent postoperative visits, likely reflecting the more complex nature of their surgery. The lower rate of reported hearing improvement in the cholesteatoma group may be attributable to greater preoperative damage and potentially less favorable surgical outcomes.

Keywords: Otology; Cholesteatoma; Day-care hospital; Antibacterial therapy;

FROM INCIDENTAL FINDING TO OSTEOMUSCULAR FREE FLAP RECONSTRUCTION: MANAGEMENT OF PRIMARY RECONSTRUCTION FAILURE FOLLOWING MANDIBULAR OSSIFYING FIBROMA RESECTION

Author: Greta Zaburaitė[1], 6th year
Supervisor: Otilija Kutanovaitė[2], M.D.
[1]*Faculty of Medicine, Vilnius University, Vilnius, Lithuania*
[2]*National Cancer Center, Vilnius University Hospital Santaros Klinikos*

Introduction. Ossifying fibroma (OF) is a rare benign neoplasm affecting craniofacial bones. In cases of radical resection, composite free flap reconstruction is usually necessary, as it is considered the gold standard method.

Case report. A 38-year-old otherwise healthy female presented with an intraorally exposed titanium implant and signs of infection 6 months following the resection of OF at the mandibular symphysis and reconstruction attempt using scaffold implant and bone substitute. It was decided to remove the implant and reconstruct the defect with a composite free osteomuscular Deep Circumflex Iliac Artery (DCIA) flap. The computer-planned cutting guides for the mandible and the left iliac crest as well as stereolithographic models were manufactured, and a titanium plate used to fixate the flap was prebended using the stereolithographic model of the mandible. Soft tissue defect was reconstructed with internal oblique muscle as part of the DCIA flap. Vascular microsurgical anastomosis was performed between DCIA and facial artery and respective veins. The postoperative period was uneventful. However, 22 days after the surgery, a superficial surgical wound infection with methicillin-resistant *S. epidermydidis* and OXA-48-producing *K. pneumoniae* had developed but was successfully managed inpatient. Currently, orthodontic treatment for the upper teeth and lower teeth restoration are being performed.

Discussion. The role of nonvascularized mandibular reconstructions remains debatable with significantly lower success rate, slower and often complicated healing, limited support for oral function and dental rehabilitation. While they might be acceptable in specific cases of small later defect reconstructions, anterior mandible requires greater stability and precision.

Conclusions. This case supports the notion that artificial tissue substitutes are not viable for anterior segmental mandibular defects. The DCIA flap is a reliable method for both primary and secondary (failed primary) reconstructions, with virtual surgical planning enabling better functional and aesthetic outcomes.

Keywords. Free Flap, Ossifying Fibroma, Anterior Mandibular Defect.

POLYSINUSITIS COMPLICATED BY INTRACRANIAL ABSCESS AND GRANULOMA

Authors: Gerda Grigucevičiūtė[1], Deivilė Kvaraciejūtė[1], 6th year
Supervisor: dr. Donata Šukytė – Raubė[2]
[1]*Vilnius University, Faculty of Medicine, Vilnius, Lithuania*
[2]*Vilnius university hospital Santaros Clinics, Centre of Otorhinolaryngology, Vilnius, Lithuania*

Introduction. Sinusitis is a prevalent disorder that, in rare cases, can lead to serious conditions including intracranial and intraorbital complications, sepsis, osteomyelitis. An intracranial abscess is a localised collection of necrosis within the brain parenchyma, often resulting from the direct spread of infection from nearby structures.

Case report. In 2024 a 17-year-old male patient was admitted to the clinic reporting severe headaches, difficulty breathing and febrile temperature for more than 2 weeks. Additionally, he complained of a swollen under-eye area as well as numbness and weakness in his left foot. During physical examination, swollen mucosae membrane of the nasal cavity and turbinates, purulent secretion from under the middle turbinate was observed. In addition, a polyp behind the middle concha and residual adenoid tissue in the nasopharynx was present. Neurological examination revealed left hemiparesis and an asymmetric gait. Laboratory tests yielded the following results: CRP 190 mg/l, WBC 13,8 × /L, PCT 0,16 µg/l. The computer tomography scan of the brain and sinuses showed heterogenous substance in the frontal, sphenoid and right maxillary sinuses. On the right side along falx cerebri, a fluid accumulation of 0,7 x 6,3 x 2,2 cm with a marginal contrast enhancement was detected. The initial stage of treatment involved a right parasagittal craniotomy and the removal of the subdural empyema. The subsequent stage - an endoscopic ethmoidectomy and adenoidectomy.

Discussion. CT is the gold standard for diagnosing sinusitis, although MRI offers higher diagnostic accuracy for intracranial spread of infection. Despite antibiotic therapy, complications of sinusitis can be life-threatening and often require surgical treatment.

Conclusions. This case represents an intracranial brain abscess in a generally healthy young man, likely resulting from the direct spread of chronic pansinusitis. It emphasizes the importance of adequate imaging and in some cases, multiple surgical interventions.

Keywords. Pansinusitis; Endoscopic sinus surgery.

CANAL WALL DOWN MASTOIDECTOMY WITH BONE PATE OBLITERATION IN RECURRENT PEDIATRIC CHOLESTEATOMA: A CASE REPORT

Author: Matas Kuncė[1], 6th year
Supervisor: Eugenijus Lesinskas[2], Prof.
[1]*Vilnius University Faculty of Medicine, Vilnius, Lithuania*
[2]*Center of Ears, Nose and Throat, Vilnius University Hospital Santaros Klinikos, Vilnius, Lithuania*

Introduction. Cholesteatoma is a progressive condition characterized by keratinized squamous epithelium proliferation in the middle ear or mastoid, with an incidence of 6-9 cases per 100,000 individuals, predominantly in children. Surgery is essential for disease eradication and maintaining a safe, dry ear. The canal wall down technique offers superior visualization, making it the preferred approach for extensive or recurrent disease. When combined with mastoid obliteration, particularly using autologous bone pate, it enhances long-term surgical outcomes.

Case report. An 11-year-old male with recurrent left-sided purulent otorrhea and progressive hearing loss underwent multiple surgeries for chronic atticoantral suppurative otitis media. Persistent cholesteatoma necessitated revision antromastoidectomy with mastoid obliteration.Intraoperatively, cholesteatoma extended into the attic, sinus tympani, and aditus ad antrum, with severe ossicular erosion. The disease and granulation tissue were excised, the external auditory canal was reconstructed with free skin grafts, and the tympanic membrane was reconstructed using tragal cartilage and perichondrium. The mastoid cavity was obliterated with bone pate harvested from the mastoid cortex and secured with hemostatic materials.

Discussion. The canal wall down technique enables complete cholesteatoma removal and reduces recurrence but may lead to cavity maintenance challenges, including persistent otorrhea. Mastoid obliteration reduces cavity size, lowers infection risk, and promotes a dry, self-cleaning ear. Various materials can be used for obliteration, with autologous bone pate offering superior biocompatibility, long-term stability, and effective cavity closure. This reduces disease recurrence and need for revision surgery.

Conclusions. Cholesteatoma is a recurrent and destructive disease often requiring multiple interventions. Canal wall down mastoidectomy remains the optimal approach for recurrent cases, ensuring complete disease removal. Mastoid obliteration with autologous bone pate significantly improves long-term surgical outcomes by reducing cavity size and infection risk.

Keywords. Mastoidectomy; canal wall down; mastoid obliteration; bone pate; cholesteatoma; chronic otitis media.

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