

ACTA CHIRURGICA CROATICA

SLUŽBENI ČASOPIS HRVATSKOGA KIRURŠKOG DRUŠTVA HLZ-A
OFFICIAL JOURNAL OF THE CROATIAN SOCIETY OF SURGERY, CroMA

**3RD CROATIAN CONGRESS OF DAY SURGERY
WITH INTERNATIONAL PARTICIPATION**

27-28 September, 2024, Opatija, Croatia

**KNJIGA SAŽETAKA
BOOK OF ABSTRACTS**



<https://crodaysurg2024.com/>

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DOBRODOŠLICA / WELCOME MESSAGE

Dear colleagues and friends,

It's our great pleasure and honor to announce the 3rd Croatian Congress of Day Surgery that will take place on 27th and 28th of September 2024 at the Amadria Park Grand Hotel 4 Opatijska cvijeta in Opatija. As you may notice, we decided to extend the venue to two days. in contrast to previous „one day congress" because ambulatory surgery has experienced tremendous growth during recent years.

Ambulatory surgery being interdisciplinary teamwork, this congress will try to empower the bonds between specialties dividing the sections by themes, not by profession. As before, the congress is once again held with the support of our colleagues and friends from IAAS, who have been a continuous and strong stimulus for the advancement of day surgery in Croatia over the past decade.

The focus of this congress will continue to be on the organization of work and the structure of day surgery units, with a special emphasis on the role of anesthesiologists in day surgery. We will critically reflect on the challenges in day surgery through new experiences. Local and international speakers will be present, and, in case of interest there will be some workshops.

Hoping to, once again, enhance our knowledge, make new acquaintances, all while enjoying pleasant company.

We greet you warmly,

Asst. prof. Ana Bosak Veršić, MD, PhD

President of the Croatian Society for Day Surgery

Prof. Željko Verzak, DMD, PhD

President of the Dental Medicine Section of the Croatian Society for Day Surgery

Sanja Ivanović, mag. med. techn.

President of the Society of Nurses and Technicians in Day Surgery

USMENA IZLAGANJA / ORAL PRESENTATIONS

MANAGEMENT IN DAY SURGERY

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Introduction: Day surgery is usually defined as a contemporary surgical treatment concept as an alternative to classical patient overnight hospital stay. But day surgery can also be considered as a different method of organizing patient care meaning it does not only focus on reducing the length of hospital stay but also on improving overall performance, reducing financial costs, and integrating day surgery in overall hospital activities.

Goal: The aim was to investigate the opinion of medical staff participating in day surgery in Croatia on management in day surgery, and to compare the results with the ones from international day surgery community.

Methods: A link to a questionnaire was delivered in an online format (google form) via email to potential participants, and the results were collected electronically.

Results: The results show that there still is no unanimous opinion on the subject.

Conclusion : Even though there is still no unanimous opinion on who should be the main leader in day surgery departments or units, most of the participants agree that the teamwork is the key solution to success.

QUALITY INDICATORS IN AMBULATORY SURGERY

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Introduction: Ambulatory surgery, where patients undergo surgical procedures and are discharged on the same day, offers numerous advantages including economic benefits and improved patient outcomes. This model of care is expanding rapidly both domestically and internationally. Initially limited to simple, routine procedures, advancements in anesthetic and surgical techniques have enabled the performance of more complex surgeries on an outpatient basis. The growth and development of ambulatory surgery are significantly influenced by quality information.

Goal: The aim of this paper is to compare existing literature to identify relevant quality indicators in ambulatory surgery.

Methods: A comprehensive review of the literature was conducted to identify and compare studies focusing on quality indicators in ambulatory surgery. The focus was on evaluating quantitative quality assessments relevant to various stakeholders, including hospitals, state institutions, and

patients. Sources included medical journals, hospital accreditation reports, and guidelines from state institutions.

Results: The analysis revealed a range of quality indicators used across different contexts. These indicators are crucial for hospital accreditation, cost reduction, medical care planning, care quality monitoring and regulation, contract formation with insurance companies, and patient decision-making in choosing the best hospital for their treatment.

Conclusion: The identification and application of quality indicators are essential for the continued growth and development of ambulatory surgery. These indicators support various stakeholders in ensuring high standards of care, optimizing costs, and enhancing patient satisfaction. The findings from the literature review provide a foundation for further research and development in this field.

JEDNODNEVNA DJEČJA KIRURGIJA, MODEL KBC ZAGREB

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Introduction: Zdravstvene ustanove imaju mogućnost organiziranja jednodnevnih kirurških odjela po različitim modelima. Mi smo 2007. godine utemeljili najveću izdvojenu jedinicu jednodnevne kirurgije u Republici Hrvatskoj, integriranu u zgradu poliklinike. Tu se izvode sve vrste kirurških zahvata s popisa Hrvatskog zavoda za zdravstveno osiguranje. Velik broj različitih kirurških zahvata, u okolnostima visoke učinkovitosti, otvara brojne organizacijske izazove. Nakon našeg desetogodišnjeg iskustva rada u velikom sustavu jednodnevne kirurgije, ušli smo u novi organizacijski model koji se odnosi na djecu.

Goal: Autori se fokusiraju na model organizacije koji pridonosi kontroli čimbenika rizika smanjujući komplikacije.

Methods: Autori uspoređuju prednosti dvaju modela: modela interdisciplinarnе suradnje, te model izolirane djece od odraslih bolesnika u jednodnevnoj kirurgiji.

Results: Za jednodnevnu pedijatrijsku kirurgiju izdvojili smo bolnički prostor, vrijeme i osoblje. U ovom modelu svi zaposlenici, od administratora do voditelja jednodnevnih dječjih ordinacija, rade samo s djecom. U ovoj organizaciji smanjuje se stres djece i roditelja, poboljšava protočnost, skraćuje boravak u bolničkim uvjetima na minimum, pojednostavljuje administracija, medicinsko osoblje je već na vrhu krivulje učenja, a Results su zavidni.

Conclusion: Od 1. listopada 2023. do 1. lipnja 2024. operirano je 400 djece po protokolima jednodnevne kirurgije, u novom modelu organizacije. U tom razdoblju nije bilo komplikacija niti ponovnih hospitalizacija.

PROCTOLOGY IN ONE-DAY SURGERY

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Introduction: The principle of one-day surgery is based on the admission, operative treatment and discharge of the patient on the same working day or within 24 hours, depending on the accepted definition of one-day surgery. In this way, all the benefits of one-day surgery come to the fore, from reducing the need for hospital facilities, relieving the burden on hospital staff, to a lower probability of hospital infections and a better outcome of treatment.

While 30-50% of all procedures today can be safely performed in a one-day surgery, when we talk about proctological procedures, the percentage reaches up to 90% of all procedures performed in proctology. Although all the benefits of the synergy of one-day surgery and proctology are evident (medical outcomes, social aspect, economic aspect), a large number of surgeons are still reluctant to perform proctology procedures through one-day surgery for fear of possible complications and postoperative pain.

At the Dubrava Clinical Hospital, proctological procedures have been performed through one-day surgery for a number of years since the very establishment of one-day surgery.

SINUS LASER-ASSISTED CLOSURE (SILAC) FOR RECURRENT PILONIDAL DISEASE PREVIOUSLY TREATED WITH PRIMARY WOUND CLOSURE

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Introduction: The incidence of pilonidal disease (PD) is approximately 26 per 100,000 populations, with men being affected two to four times more often than women. Recurrence rates of pilonidal disease have been reported to be high as 30%, with the majority of recurrences (80%) occurring within the first year.

Goal: Aim of this study is to demonstrate the use of laser in treatment of recurrent PD after primary wound closure treatment.

Methods: A single center review of patients with recurrent PD, previously treated with primary wound closure were evaluated in period 2020 to April 2024. A SiLaC[®] procedure was done with a probe, which is a smooth radial diode laser device from Biolitec[®] (Biomedical Technology GmbH, Jena, Germany) at 1470 nm wavelength, and power of 12 W, was used.

Results: A total of 7 patients were included with a median follow-up of 23 months (range 18-40 months). Five patients were male and two females. Success rate was 71,42%. Mean time until wound closure was 7 weeks (range 4-17 weeks). Two patients (28,58%) had postoperative wound infection with permanent discharge, which was lesser than before SiLaC[®] treatment and required additional

and extensive surgery. Mean time to perform regular daily activities including working was 9 days (range 2-38 days). Majority of patients (84%) did not require painkillers or only paracetamol. The mean satisfaction score was 9 (range 5-10).

Conclusion : Although small number of patients were included in this study, SiLaC® is a great minimally invasive treatment for recurrent PD with high patient satisfaction and a good success rate.

PEDIATRIC ENDOSCOPIC PILONIDAL SINUS TREATMENT: LESSONS LEARNED AFTER 100 CONSECUTIVE CASES

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Introduction: Pediatric Endoscopic Pilonidal Sinus Treatment (PEPSiT) has favorable short-term-outcomes, but there is a lack of reliable data on medium and long-term follow-up.

Aim: The objective of our study was to evaluate the effectiveness and advantages of PEPSiT vs conventional surgery of pilonidal sinus in the pediatric population.

Methods: A quasi-experimental study was carried out in pediatric patients undergoing pilonidal sinus surgery at a single institution from 2019 to 2022. Excision and healing by secondary intention (EHSI), excision and primary closure (EPC), and PEPSiT were compared. The surgical technique chosen was surgeon-dependent.

Results: 149 patients were studied – 100 undergoing PEPSiT, 28 undergoing EHSI, and 21 undergoing EPC. Median full healing process was 4 weeks (IQR: 3-8) in PEPSiT, 16 weeks in EHSI (IQR: 12-26.5) and 7 weeks (IQR: 4- 10) in EPC ($p=0.0001$). Pain on the Visual Analogue Scale (VAS) and need for analgesics were lower in the PEPSiT group ($p < 0.001$). Mean time to return to normal life was shorter with PEPSiT – 177 days earlier than EHSI (CI95%: 124.7-230.2; $p<0,001$) and 7.2 days earlier than EPC (CI95%: 20.2-138.6; $p<0,009$). Complications with PEPSiT were 9.3 times lower than EHSI (OR: 9.3; CI95% 3.5-24.7) and 8.5 times lower than EPC (OR=8.5; CI95% 2.9-24.4). EHSI had 5.3 times more probability of recurrence than PEPSiT (OR=5.3; CI95% 1.3-22.7), and EPC 15.2 times more (OR=15.2; CI95% 3.2-71.7).

Conclusions: Endoscopic pilonidal sinus treatment is effective in medium-term follow-up, with fewer complications than classic techniques. It allows for an early return to normal life without restrictions.

ORGANIZATION OF AMBULATORY AT THE ENT CLINIC OF UNIVERSITY HOSPITAL CENTRE ZAGREB DURING THE COVID-19 PANDEMIC AND IN THE POST-EARTHQUAKE PERIOD

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The ambulatory surgery of ENT Clinic in University Hospital Centre Zagreb was founded in 2016. During the next 4 years, new procedures for surgical procedures were approved, an OR for general anesthesia was available twice a week and for local anesthesia once a week with 600 operations annually.

Two independent events in 2020 affected the organization and efficiency of the ENT Clinic's ambulatory surgery. 11.3.2020. The WHO declared the COVID-19 pandemic and introduced isolation protocols to prevent the spread of infection. 22.3.2020. Zagreb was hit by a devastating earthquake that damaged the buildings of Hospital Centre and led to significant changes in the organization.

We designed and introduced new protocols for the organization of the ambulatory surgery of the ENT Clinic in reduced capacities with the aim of ensuring safe conditions for patients and employees, reducing the possibility of the spread of SARS CoV infection and avoiding a large number of late cancellation. The percentage of cancellation was slightly higher than before, up to 10%, mostly due to the patient's infection with COVID-19. By reorganizing the work and use of OR, in 2021, we managed to equalize the annual number of operations with the pre-pandemic years. The rate of postoperative complications was similar to world centers for ambulatory surgery (within 9%). The number of post-operative hospitalizations in the inpatient was similar as in the pre-pandemic period. During the pandemic, the ambulatory surgery was not the focus of the spread of the COVID-19.

NEW PROCEDURES IN AMBULATORY ENT SURGERY – OUR 5 YEARS OF EXPERIENCE

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Septoplasty is a procedure to correct deformities of the nasal septum, usually performed in inpatient part of ENT departments. The Croatian Health Insurance Fund has approved in 2018 that this procedure can be performed on an ambulatory surgery.

In collaboration with our anesthesiologists, we've developed a protocol to determine which patients can be operated as outpatients.

In the period from January 2019 to December 2023, we performed 172 septoplasties on an outpatient basis. We had no complication that required prolonged observation. All patients were discharged home 6-8 hours after the operation. During the same period, septoplasties were performed on 699 patients in the inpatient part of our department. The total length of hospitalisation was 1726 days, an average of 2.46 days per patient. Average age of patients in ambulatory surgery was 34 year. In terms of cost-effectiveness, outpatient surgery is 16% more effective than inpatient surgery. Two independent events affected the length of the waitlist. 22.3.2020. Zagreb was hit by a devastating earthquake that severely damaged our hospital. After that, not all operating rooms were available to us. Due to the COVID-19 pandemic in 2020, elective procedures have been postponed.

In five years of work, we have shown that septoplasty is a safe procedure that can be performed on an outpatient surgery, provided that a high-quality examination and screening of the patient is carried out. Patients can be discharged the same day and it is less expensive.

KIDNEY TRANSPLANT PATIENT IN AMBULATORY SURGERY - A CASE REPORT

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Introduction: With growing number of transplanted patients worldwide and longer life expectancy, the request for ambulatory surgery, especially orthopaedic, in this group of patients also increases. We present a case of kidney transplant patient requesting partial knee replacement to show that with adequate preparation ambulatory surgery is safe to perform in this high-risk patients.

Results: A 64-year-old male patients who underwent cadaveric kidney transplantation 24 years ago, with a history of hypertension, hyperlipidaemia and mild aortic stenosis presented for partial knee arthroplasty. His immunosuppression consisted of cyclosporine, mycophenolate mofetil and prednisone. His regular nephrologist check-ups revealed stable renal function (glomerular filtration rate 56 ml/min/1,73m²). Informed consent stating that surgery might aggravate his renal function was obtained. Preoperative thromboprophylaxis (dalteparine) was given and his immunosuppression therapy was continued as usual. Regional anaesthesia (spinal) following adequate intravenous pre-hydration was performed, insuring adequate anaesthesia and haemodynamic stability throughout the procedure and afterwards. No tranexamic acid was applied. An intermediate bolus of methylprednisolone was given at the beginning of anaesthesia. Wound infiltration with 0,25% levobupivacaine was performed following partial knee endoprosthesis implantation. Postoperative analgesia consisted of paracetamol and infusion of tramadol, excluding completely non-steroid anti-inflammatory drugs and metamizole and providing VAS less than 3. Oral intake was resumed immediately following surgery and the patient was discharged home the following day, walking with crutches (within 24 hours upon admission). Renal function did not decline.

PLATELET-RICH PLASMA IN ONE-DAY SURGERY, HOW FAR ABOVE ORTHOPEDICS CAN WE GO?

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Introduction: Platelet-rich plasma can be used as a safe and efficient treatment for wider range of pathologies, apart from orthopedic and aesthetic cases.

Goal: We aim to show promising results in PRP treatment of chronic wounds and both anal and chronic anal fissures.

Methods: Report of cases

Results: We report on 19 cases of anal fissures and 3 cases of long-standing chronic wounds successfully treated with PRP

Conclusion : Platelet-rich plasma (PRP), as a form of regenerative medicine easily applied in the settings of one-day surgery, has been widely recognized and used as a treatment option in orthopedic pathologies, mainly gonarthrosis and coxarthrosis.

PRP is overtaking the premier spot as the most widely applied form of biologic therapy. The body of evidence supporting its safe and efficient use is growing daily, especially regarding its anti-inflammatory and analgesic effects and wound healing promotion. Firstly and most widely explored in orthopedic and aesthetic cases, nowadays, PRP stretches to other pathologies that can be successfully treated in the setting of one-day surgery. Encouraging randomized control trial in PRP treatment for both chronic and acute anal fissures not only proved its superiority compared to conventionally used therapeutic approaches, but also offered a very first therapeutic option common to both forms of this benign but quality-of-life deteriorating disease.

The evidence presented by medical literature supporting the clinical use of PRP in the treatment of chronic wounds is becoming increasingly compelling.

We proudly present the first One-day surgery department that successfully applies this form of treatment for orthopedic cases, chronic wound management and anal fissures.

ANESTHETIC CONSIDERATION FOR OBESE PATIENTS IN ONE DAY SURGERY

Ana Brundula, Morena Milić

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Introduction: Obesity is a complex multifactorial, chronic disease. It is defined as a body mass index (BMI) equal or greater than to 30 kg/m². According to the World Health Organization, in 2022, 2.5 billion adults aged 18 years and older were overweight, including over 890 million adults who were obese.

Goal: The aim of this article is to present current recommendations in anesthesia for obese patients in one day surgery

Methods: A database search was conducted using Medline, Pubmed, and Scopus with the aim of understanding the complexity of the approach in anesthesia of obese patients. Our analysis was specifically related to the strategies and techniques of anesthesiological approach in conditions of one-day surgery.

Results: Obese patients are a challenge for every anesthesiologist because of the possible increased risk of periprocedural complications. Enhanced understanding of the pathophysiology and pharmacology of obesity allows an anesthesiologist to provide safe, effective anesthesia.

Conclusion : With appropriate selection and risk prediction, day-case surgery is a safe option for obese patients.

SIMULTANEOUS BILATERAL KNEE AND HIP ARTHROPLASTY- SINGLE CENTRE EXPERIENCE

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Introduction: Simultaneous bilateral knee and hip prosthesis implantation is still rarely performed. Pulmonary embolism and haemorrhage are major complications that are considered to be more frequent following this type of surgery. We want to show that careful patient selection and experienced surgeon are mandatory for these high- risk procedures so complications can be avoided and they can be safely performed in short stay ambulatory surgery.

Results: We present 3 cases: 2 simultaneous bilateral knee (BKA) and one simultaneous bilateral total hip (BHA) replacement. Patients underwent surgery in Special hospital Agram Zagreb during 6-month period.

Patients were all ASA II, mean age 59 and mean BMI 28,2 kg/m². They were all discharged from hospital within 72 hours upon admittance. All the procedures were performed under regional anaesthesia- spinal anaesthesia.

Ultrasound guided regional pericapsular nerve block (PENG) was performed for postoperative analgesia in BHA patient. BKA patients received local infiltration analgesia at the end of procedure, combined with non-opioid analgesia regiment intravenously (tramadol and metamizole infusion combined with paracetamol and ketoprofen programmed boluses). All patients received dexamethasone and tranexamic acid intravenously at the beginning of procedure. None of the patients required transfusion and exhibited no signs of complications. Early mobilisation within 24hours of surgery was accomplished.

Conclusion : With careful patient selection simultaneous bilateral knee and hip arthroplasty can be safely performed. In those patients procedure is beneficial because it requires only one surgical treatment and one anaesthesia, shortens total number of hospital days and rehabilitation therefore yielding lower financial burden.

PREPARING PATIENT FOR APPLICATION FOR PLATELET-RICH PLASKA (PRP)

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Introduction: Minimally invasive procedures using PRP (Platelet-rich plasma) are becoming increasingly popular in broader applications today. In addition to its orthopedic use, it has proven very effective in treating chronic wounds and lesions, including proctological conditions such as anal fissures. The application of PRP involves introducing a concentrated, biologically active substance from the patient's body through a thin puncture needle through the skin or subcutaneous tissue.

Goal: Emphasizing the importance of proper patient preparation for PRP application.

Methods: The literature review was conducted using PubMed, a comprehensive database. The search terms included "Platelet-Rich Plasma," "PRP therapy," "chronic wounds," "anal fissures". Studies and articles were selected based on relevance to PRP applications, effectiveness, preparation methods, and patient outcomes. Preference was given to recent publications. The selected articles were reviewed and synthesized to gather comprehensive information on PRP therapy's clinical applications, preparation techniques, and effectiveness in various medical conditions.

Results: PRP has been shown to accelerate the healing of chronic wounds and ulcers, including diabetic foot ulcers and pressure sores. The growth factors in PRP promote tissue regeneration and reduce inflammation, leading to faster recovery times.

Conclusion : Healthcare providers must follow best practices, address common pitfalls, and adhere to ethical guidelines to maximize the benefits of PRP treatments for their patients. By doing so, they can provide a valuable, effective treatment option that leverages the body's own healing mechanisms to improve patient health and well-being.

HOW CAN IT SUPPORT THE FIGHT AGAINST AMR IN THE DAY SURGERY SETTING?

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Introduction: Antimicrobial resistance (AMR) represents a significant global threat, with an estimated direct responsibility for 1.27 million deaths and contributing to 4.95 million deaths worldwide in 2019. Addressing AMR requires effective strategies for the rational use of antimicrobials, particularly in surgical settings where prophylaxis plays a critical role as for example single day surgery.

Goal: The integration of Information Technology (IT) in healthcare can enhance antimicrobial stewardship by monitoring and improving antibiotic use. In Croatia, national guidelines for surgical prophylaxis have been established, following AGREE methodology, to standardize practices across hospitals and reduce the misuse of antimicrobials. These guidelines, known as the ISKRA guidelines, have been in place for over 15 years and are currently under revision to ensure they reflect the latest evidence and practices.

Methods: Surgical prophylaxis is essential in preventing surgical site infections (SSI), which in turn helps in combating antimicrobial resistance. Effective prophylaxis requires careful consideration of several parameters: the choice of antimicrobial based on the specific surgical procedure and diagnosis, the timing of administration to align with the pharmacodynamics of the antimicrobials, and the dosage adjusted for patient factors such as weight and kidney function.

Results: Day surgeries present a unique opportunity to reinforce antimicrobial stewardship. Implementing these guidelines through Electronic Medical Records (EMR) can streamline and standardize prophylaxis practices. For example, novel methodologies that integrate guidelines with structured data in EMRs can ensure accurate and timely administration of prophylactic antimicrobials. This approach not only enhances the adherence to guidelines but also supports the overall Goal of reducing AMR by minimizing unnecessary antimicrobial exposure and optimizing the use of prophylactic agents.

Conclusion : In summary, by leveraging IT and adhering to updated national guidelines, single-day surgery can significantly contribute to antimicrobial stewardship, thereby mitigating the threat of AMR and improving patient outcomes. Compliance to the guidelines is not just the matter of strategy, but also requires change in the current culture and established practices. We all share the responsibility of tackling the AMR, and must join the effort in fighting this global public health problem.

PROTOCOL-DRIVEN DISCHARGE IN ONE DAY SURGERY - THE USE OF DISCHARGE SCORING SYSTEMS

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Introduction: Due to numerous medical, economical and social advantages, which have been confirmed through several decades long practice in the wealthiest health systems of the world, one-day surgery is nowadays a growing form of elective surgical practice in Croatian hospitals. Enabling admission to hospital, surgical treatment and discharge home within just a few hours, it has to be managed according to the strictest principles of patients' safety.

Goal: Patients' safety in one-day surgery facilities is based upon several important determinants – a careful preoperative anesthesiological assessment and patient selection, improved anesthetic and surgical techniques, a protocol-driven discharge home, detailed verbal and written instructions on how to behave after the surgery and the same-day discharge, all members of the multidisciplinary team being well-trained in one-day surgery practice, etc.

A scoring systems, evaluating patients' readiness for discharge, represent very useful form of aforementioned protocol-driven discharge. Some of the earliest scoring systems, which have been used since 1970s, are still an integral part of current discharge protocols. Today's scoring systems usually contain specific discharge criteria categories defined upon traditional scoring system templates, clinical experience and local policies. Considering unavoidable legal implications of untimely discharge, scoring systems are accepted by regulatory societies worldwide as a reliable form of safe discharge-readiness evaluation.

Conclusion: Since the responsibility of patients' discharge is commonly assigned to one-day surgery nurses, the leading physicians of one-day surgery facilities have the responsibility of determining and implementing easily applicable discharge protocols as a crucial part of safe, and thus effective, one-day surgery.

ONE DAY SURGERY USING ROBOT-ASSISTED SYSTEM AT UNIVERSITY HOSPITAL SPLIT

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Introduction: Robot-assisted surgery is becoming a widely accepted method, because this technology enhances accuracy, safety, and improves treatment outcomes, as it is associated with reduced blood loss, decreased morbidity, and accelerated recovery.

Goal: We investigated the initial results of hernioplasties and cholecystectomies after the introduction of robotic-assisted surgery in day surgery at University Hospital Split..

Methods: The first supervised surgeries under proctor's supervision were performed on March 11, 2024. From March 11, 2024, when the first surgery was performed, to March 20, 2024, a total of 6 patients were operated. There were 5 males and 1 female, with an average age of 56.7 years (range 33-73 years). Three cholecystectomies were performed due to chronic calculous cholecystitis and 3 hernioplasties (2 bilateral).

Results: The average docking time of the system was 22.5 minutes (range 15-35 minutes).

The average duration of cholecystectomy surgeries ranged from 50-60 minutes and for hernioplasties, it ranged from 30-80 minutes (bilateral hernia).

During surgery, in the immediate and later postoperative period, there were no complications.

All patients were part of the day surgery program and were discharged from the hospital within 24 hours of admission.

Conclusion: Robot-assisted surgical procedures can certainly be introduced in hospitals where minimally invasive surgery is well-developed, with sufficiently skilled staff and a high volume of surgical procedures. Based on our modest experience, the setup time and performance of surgical procedures may be slightly longer initially, but surgeries can be safely performed without complications even during the initial period of the system implementation.

DIAGNOSTIC AND OPERATIVE HYSTEROSCOPY

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Introduction: Hysteroscopy is an endoscopic surgical technique that has become one of the most important invasive procedures. It enables the diagnosis of all pathological conditions of the uterus, fallopian tube openings, cervical canal, and the therapy of almost all changes affecting these parts of the uterus.

Goal: The advantage of endoscopic procedures includes shorter duration, better visibility of the operative field, greater precision, less pain, faster recovery and return to work, absence of abdominal wall incisions, and lower treatment cost. The advantage of hysteroscopy over most other endoscopic techniques lies in its ability to access the uterus through physiological openings such as the vagina and the cervix.

Methods: Hysteroscopy has become the method of choice for treating uterine septa, submucosal fibroids, polyps, foreign bodies in the uterus, bleeding disorders, and endometrial hyperplasia. Diagnostic hysteroscopy is performed under analgosedation or short-term anesthesia during which the patient is relaxed, drowsy, or asleep and does not feel pain. Indications for hysteroscopy include all disorders of the uterine mucosa.

Results: There are several contraindications, divided into two groups: absolute and relative. Absolute contraindications include a history of recent or acute pelvic inflammatory disease (PID) due to possible exacerbation of inflammation or reactivation of dormant foci. Pregnancy is also an absolute contraindication due to the potential risk of fetal damage. Profuse uterine bleeding is considered a relative contraindication for performing the procedure due to the difficulty in visualizing the uterine wall, requiring greater operator experience. Positive microbiological cervical swabs can cause inflammation to spread to the uterus and fallopian tubes. In such cases, the procedure should be postponed, but if performed, appropriate antibiotic therapy should be administered.

Conclusion: Hysteroscopy is becoming the "gold standard" for assessing the uterine wall in infertile patients. Direct visualization of the uterine wall provides a better view of the uterine mucosa to promptly diagnose and eliminate abnormalities that interfere with embryo implantation. Hysteroscopy is not the method of choice for detecting changes in the fallopian tubes; for that, we use hysterosalpingography (HSG). Hysterosalpingography is not the most reliable method as it may inaccurately depict anomalies as filling defects, resulting in an incorrect diagnosis in 8% to 35% of cases. These two methods remain complementary in the evaluation of infertile patients.

ROLE OF REGIONAL ANAESTHESIA IN PAEDIATRIC AMBULATORY SURGERY

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Introduction: Regional anaesthesia techniques are well established in both adult and paediatric population. In adults, such methods may be the only type of anaesthesia given to the patient for a certain procedure. In paediatric population, patients usually require general anaesthesia (or at least sedation) to perform regional anaesthesia. This, combined with the fact that many ambulatory surgeries are not related with high pain levels, makes one wonder should we perform both general and then regional anaesthesia in such cases. In Clinical Hospital Center Rijeka (CHC Rijeka), regional anaesthesia is routinely performed for almost all ambulatory surgery.

Goal: A retrospective analysis of different types of regional anaesthesia performed for paediatric ambulatory surgery in children younger than 12 in CHC Rijeka in 2023 was performed to see how it impacts consumption of analgesic drugs, length of stay, whether it is associated with any complications and should any observations change the current hospital practise.

Methods: A retrospective observational study of all paediatric ambulatory surgery procedures performed in CHC Rijeka in 2023 under anaesthesia care was made. Patients that were suitable for local anaesthesia only (provided by the surgeon) were excluded from the study. A list of all paediatric ambulatory procedures was made, paired with how the anaesthesia was managed. Intraoperative opioid consumption rates and postoperative intravenous analgesia needs were looked at, as well as complication rates and how it affected the length of stay.

Results: All paediatric ambulatory surgery patients that received regional anaesthesia received general anaesthesia as well. There were no noted regional anaesthesia related side effects and no cases of local anaesthetic systemic toxicity. Regional anaesthesia was mostly performed under ultrasound guidance with levobupivacaine. Regional anaesthesia resulted in a positive trend for intraoperative opioid consumption and reduced requirements for postoperative intravenous analgesia. None of the patients required a prolonged length of stay due to regional anaesthesia.

Conclusion: Regional anaesthesia is a safe and reliable method for paediatric ambulatory surgery and should be routinely performed by paediatric anaesthesiologists.

IMPLEMENTATION OF THE DAY UNIT STRATEGY IN INTERVENTIONAL MINIMALLY INVASIVE TREATMENT OF CHRONIC PAIN AT THE PAIN CLINIC OF THE GENERAL HOSPITAL PULA

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Interventional pain medicine (IPM) is a relatively new field of medicine dedicated primarily to the treatment of chronic pain conditions of the spine and other degenerative conditions of the skeletal joint. Common procedures for back pain include diagnostic & therapeutic epidural steroid injections, caudal epidurolysis, diagnostic medial branch block & therapeutic radiofrequency ablation, as well as diagnostic & therapeutic large joint blocks & radiofrequency ablation for degenerative skeletal pain. As IPM treatments have evolved, they have become less invasive, allowing for rapid recovery, which speeds ambulation and promotes same-day discharge.

Patients scheduled for elective IPM are strictly performed in a day unit operating room under fluoroscopy to ensure strict aseptic conditions.

The use of day unit operating room and the implementation of IPM depends on a well-executed strategy of the day unit by ensuring quality staff and facilities, designing safety check lists, optimizing the application of information technologies and monitoring the outcome of all its phases.

The most important thing is to create a high-quality multidisciplinary IPM team that coordinates: the preliminary assessment of the patient, his preparation and admission without competing requirements, the ideal implementation of the pain intervention procedure, the post-procedural recovery period, including the recognition and treatment of possible complications and the achievement of discharge, i.e. monitors the experience and satisfaction of patients during all phases IPM.

Based on our many years of experience, and in order to fully utilize the possibilities of developing interventional pain treatment in other institutions as well, it is necessary to reconfigure the organization of the work process and services of the Pain Clinics.

The aim of this report is to show how the use of the day unit operating room can be optimized, the importance of introducing a radiology technician as a member of the IPM team, and why it is important to design a well-designed admission/discharge strategy in order to achieve the best medical practice and maximize procedural capacity while reducing delays and post-procedural complications.

SAFE PREPARATION AND SAFE APPLICATION OF LOCAL ANESTHETICS IN ONE-DAY SURGERY OF VARAŽDIN GENERAL HOSPITAL

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The safety of the medical procedure means ensuring the medical procedures against harmful unwanted events. Safety refers to the safety of the patient, healthcare workers and the safety of healthcare procedures (Act on the Quality of Health Care, NN 118/18).

One-day surgery and the day surgery hospital of OB Varaždin perform daily surgical procedures in which local anesthetics are applied. We saw the need for the preparation of unit therapy for each dose of administered anesthetic, there were also requirements from the Department for Health Care Quality and Supervision of OB Varaždin, given that our institution is accredited according to the International Accreditation Rules for Healthcare Institutions AACI America and there were conditions for its implementation, because by the decision of the Ministry of Health, the pharmacy OB Varaždin is included in the implementation of the National Recovery and Resilience Plan 2021-2026, which introduces the Unit Therapy Distribution System.

The cooperation of the employees of the Central Operating Block, the Hospital Pharmacy and the Department for Health Care Quality and Supervision ensured that the drugs in the hospital pharmacy are packed in single-dose packages with information on the dose of the drug, the method of storage and the date of packaging in controlled and aseptic conditions, and with the accompanying documentation delivered to the operating room, where individual doses of the drug are administered to the patient during surgery.

This method of preparation and application of local anesthetic increased the safety of the patient, the safety of the health procedure and reduced the time burden of the nurses' work at the workplace.

With the aforementioned measures, we ensured the traceability and quality of healthcare procedures (NN 118/18), which is achieved by documenting the aforementioned healthcare procedures and thus improved the quality of healthcare for our patients.

DELAYED RECONSTRUCTION AFTER REMOVAL OF SKIN TUMOR - ORGANIZATIONAL CHALLENGE IN ONE-DAY SURGERY

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Introduction: According to the latest guidelines for the treatment of skin tumours, defect closure after removal should be delayed until the histological negative margins are confirmed. Recurrent basal cell carcinomas sometimes show unpredictable patterns of multicentric growth, which is not visible macroscopically, and without a pathologist's feedback, it is not possible to radically remove the tumour.

Organizationally, for these patients it is necessary to schedule surgery at least every seven days, and we do not know in advance how many surgeries will be necessary.

Goal: To demonstrate the advantages of the delayed reconstruction technique compared to the usual approach of immediate reconstruction after removal of macroscopically visible changes.

Methods: The course of treatment for 2 patients was compared, from the initial operation, through the recurrence, to the definitive resolution. We compared the time spent in the operating room, the cost of spent material, and the total duration of treatment.

Results: One patient was treated with excision with immediate reconstruction, and reexcision after histological findings of positive margins, recurrence occurred 4 years later, and then 3 more excisions were needed until histologically negative margins were achieved. Each time the wound was closed, once primarily, the second time with a local flap, and the third time with a free skin graft. The second patient was treated with excision with primary closure, recurrence occurred 4 months later, excisions without reconstruction followed, reconstruction was performed after histological verification of negative margins.

All analysed parameters were more favourable in the patient whose recurrence was treated with delayed reconstruction.

Conclusion: The technique of delayed reconstruction, according to current guidelines, is superior to the more common approach of immediate reconstruction after excision of a macroscopically visible tumour. The demonstrated benefits of delayed reconstruction should encourage a change in approach and wider use, despite the organizational challenge.

WHAT DOES A DAY SURGERY NURSE NEED TO KNOW?

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Introduction: Day surgery nurses play a key role in ensuring a smooth and safe surgical procedure for patients who come and go from the hospital on the same calendar day. Their competences are aimed at providing top-quality care before, during and after surgery, taking into account the special needs of patients and the specifics of procedures.

Goal: Surgery nurses in day surgery must possess a wide range of skills and knowledge to ensure the safe and efficient flow of surgical procedures and patient care in a day environment.

Methods: preparation of the operating room, patient preparation, the course of the operation, communication and coordination, postoperative care, security protocols and standards, technical skills, administrative skills.

Results: improving patient safety, a more efficient operating room, increased efficiency of the surgical team, compliance with safety standards, advanced technical skills, proper administration, better outcome for the patient

Conclusion: Adequate and high-quality care is achieved in the operating room of one-day surgery by acquiring the aforementioned knowledge and skills, as well as continuous education and adoption of methods.

DNEVNA KIRURGIJA U OFTALMOLOGIJI

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Introduction: Dnevna kirurgija u oftalmologiji nije samo operacija katarakte već obuhvata i operacije okuloplastike, operacije na prednjem segmentu oko pa i neke vitreoretinalne zahvate. Ispostavilo se da je dnevna kirurgija katarakte najprivlačnija. U našoj zemlji BiH još uvijek moramo boriti sa nekim liječnicima, anesteziolozima i medicinskim sestrama koje su skloniji hospitalizaciji pacijenata. Prisutno je i nepisano pravilo da je jednodnevna kirurgija manje vrijedna. Ono što je vrlo bitno je da mi moramo pacijente educirati šta je to dnevna kirurgija, onda je svakako za očekivati da većina pacijenata se više voli oporavljati u kućnom okruženju. Ono što je važno u bolnici je da dnevna kirurgija ima zaseban prostor i opremu. Ima bolesničke sobe, svoju operacijsku dvoranu, mjesto za prijem i administrativni prostor. U BiH a i mi u Mostaru u svim drugim granama idemo na sve veći broj jednodnevne kirurgije.

Goal: Okrenuti se sve više jednodnevnoj kirurgiji i jednodnevnoj bolnici

Methods: U oftalmologiji sve operacije i intervencije kod nas se rade u jednodnevnoj kirurgiji.

Results: U BiH se zbog pretrpanosti pacijenata i čekanja, a i velike potrošnje novca mora preći što više na jednodnevnu bolnicu i kirurgiju jer su nužne i mjere štednje.

Conclusion: U jednodnevnoj kirurgiji sav kadar je adekvatno raspoređen, smanjeni su troškovi b.o dana hrane, lijekove što je veoma značajno za našu situaciju u zdravstvenom sustavu. Mi sve zahvate. rađene u opštoj anesteziji poslijepodne otpuštamo kuci. Možemo zaključiti da dnevna kirurgija predstavlja dobru alternativu višednevnoj kirurgiji, koja pacijentima omogućava bržu rehabilitaciju vida i kvalitetniji postoperativni oporavak uz manje finansijske troškove bez komplikacija vezanih za ishod samog operativnog zahvata.

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SYNDACTLY

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Introduction: Syndactyly is a condition where two or more fingers or toes are fused together. This can occur due to skin fusion, bony fusion, or both.

Goal: The aim of this paper is to explain what syndactyly is, how it is diagnosed, treated, and what the nursing roles are for patients with this diagnosis.

Methods: Diagnosing Syndactyly

Physical Examination: A doctor examines the child's hands or feet to assess the extent of finger or toe fusion. **Radiography (X-ray):** Imaging methods like X-rays are used to evaluate the bones and joints to determine if the fusion is bony or just tissue-related. **Genetic Testing:** If a genetic syndrome associated with syndactyly is suspected, genetic tests may be performed. **Treatment Methods for Syndactyly**

Surgical Intervention:

Simple Syndactyly: Surgery is typically performed at an early age, usually between 6 months and 2 years, to allow for normal growth and development of the fingers.

Complex Syndactyly: May require more complex surgical procedures that involve the reconstruction of bones, tendons, and skin.

Postoperative Care:

Physical Therapy: Helps in restoring the function and mobility of the fingers or toes.

Splints and Braces: Used to protect the fingers after surgery and to encourage proper healing.

Non-surgical Methods: In mild cases: When syndactyly does not impair function, a non-surgical approach might be taken, involving regular check-ups and monitoring of the condition. Diagnosing and treating syndactyly typically involves a team of specialists, including orthopedic surgeons, geneticists, and physical therapists, to ensure a comprehensive approach to care.

Results:

Diagnostic results

****Physical Examination**:** Identifies the presence and extent of syndactyly, noting whether it involves only the skin or also the bones.

****Radiography (X-ray)**:** Determines the type of fusion (bony or soft tissue) and helps in planning the surgical approach.

****Genetic Testing**:** Identifies any associated genetic syndromes, providing a broader understanding of the patient's condition and potential additional medical needs.

Treatment Outcomes

1. ****Surgical Intervention**:**

****Successful separation**:** Most surgeries successfully separate the fused digits, improving function and appearance.

****Complications**:** Potential complications can include scarring, infections, and in rare cases, problems with blood flow to the digits. Additional surgeries may be required for complex cases.

****Recovery and functionality**:** Postoperative care, including physical therapy, usually results in good functional recovery. Most patients regain significant, if not full, use of the affected digits.

2. ****Non-surgical Management**:**

****Monitoring and regular assessments**:** For mild cases, regular monitoring can ensure that the condition does not worsen or impact function.

****Adaptations**:** Patients might develop adaptations to manage any functional limitations.

Overall, with appropriate diagnosis and treatment, the prognosis for patients with syndactyly is generally positive, allowing for improved functionality and quality of life.

Conclusion: Syndactyly is a congenital condition characterized by the fusion of fingers or toes, which can vary in severity from simple skin fusion to complex bony fusion. Accurate diagnosis through

physical examination, radiography, and genetic testing is essential to determine the appropriate treatment plan. Surgical intervention, often performed at a young age, is the primary treatment method and typically results in improved function and appearance of the digits. Postoperative care, including physical therapy, plays a crucial role in ensuring successful recovery. For milder cases, non-surgical management and regular monitoring can be effective. With timely and appropriate intervention, patients with syndactyly generally achieve positive outcomes, leading to enhanced functionality and quality of life.

APPLICATION OF PRGF GEL IN HEMATOLOGY PATIENTS AT THE UNIVERSITY HOSPITAL CENTER ZAGREB

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Introduction: Von Willebrand disease is an autosomal dominant hereditary disease that manifests as a tendency to bleed, caused by a deficiency or reduced function of the von Willebrand factor (vWF). It is the most common hereditary form of hemorrhagic diathesis, with an estimated incidence of 1 in 800 to 1000 people in the general population. Treatment for patients with von Willebrand disease is based on the prophylaxis and/or treatment of bleeding, involving the use of factor VIII and vWF concentrates derived from plasma or recombinant technology.

Case Report: At the end of 2023, a patient Ž.Š., born in 1968, was admitted to the Hematology Department with a diagnosis of Von Willebrand disease but also with inhibitors to factor VIII and vWF due to rectal bleeding, which endoscopy revealed as angiodysplasia likely caused by radiation following prostate cancer. Due to the complexity of the treatment, a multidisciplinary team of hematologists, gastroenterologists, and transfusionists decided to locally apply PRGF gel via endoscope, which was prepared by the Clinic for Dentistry at the University Hospital Center Zagreb. PRGF gel is based on the formulation and use of the patient's own cells with biological activity, growth factors, and fibrin biomaterial to stimulate and accelerate tissue healing and regeneration. Communication among the team of doctors and nurses during the preparation of the gel is of utmost importance. High-quality healthcare, which includes the administration of prescribed therapy, continuous monitoring of vital functions, provision of nursing care, and maintenance of active musculature, is a prerequisite for a positive outcome and maintenance of quality of life.

Conclusion: The aim of this paper is to demonstrate the excellent cooperation, communication, and connection of the multidisciplinary team at the University Hospital Center Zagreb, where the nurse plays a crucial role.

ASSISTANCE IN THE APPLICATION OF PLATELET-ENRICHED FIBRIN IN CHILDREN'S DENTISTRY

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In children's dentistry, endodontic treatment of young permanent teeth can be assisted by the use of platelet-rich fibrin (PRF). The main Goal of the method of applying the platelet-enriched fibrin preparation is to achieve the regrowth of vascular and neurological tissue in the pulp chamber and to achieve further growth of the tooth root. In the Department of Pediatric and Preventive Dentistry of the Clinical Hospital Center Zagreb, the procedure has been applied since 2018.

The platelet-enriched fibrin preparation is an autologous material. It is prepared from a sample of extracted blood that is centrifuged, a process that separates blood cells from plasma, and the preparation is made from part of the plasma using a specially made set. Part of the plasma looks like a gelatinous mass, and it consists of platelets, leukocytes, growth factors and a fibrin network that connects them to each other.

The provision of health care includes the psychological preparation of the patient and parents, the preparation of the clinic area, the preparation of centrifuges, sets for the preparation of preparations, dental instruments, materials and medicines, and the provision of conditions for carrying out the procedure in aseptic working conditions. It is necessary to perform a venipuncture, and immediately after the venipuncture the blood sample is included in the centrifugation. Then, it includes assisting the doctor during the preparation of the preparation and assisting during the dental procedure.

THE ROLE OF THE NURSE IN ORAL-SURGICAL PROCEDURES UNDER GENERAL ANESTHESIA

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Introduction: A nurse, dental assistant, in their daily work at a dental clinic, encounters various oral-surgical procedures. Tooth extraction is one of the most common oral-surgical procedures in a dental clinic. However, certain procedures, such as complicated extractions involving alveotomies, surgeries for large cysts and jaw tumors, and major jaw reconstructions following extensive surgical interventions, require the procedures to be performed under general anesthesia. As an indispensable member of the surgical team, the nurse, dental assistant aids in preoperative preparation and assists during the procedures.

Goal: With the development of outpatient surgery, it has become easier for patients and operators to manage more complex oral-surgical procedures.

Methods: When assisting with oral-surgical procedures under local anesthesia, the nurse, dental assistant stands to the left of the patient, ensuring the operator has maximum visibility of the surgical field. Holding a cheek retractor with one hand to allow the surgeon access to the operative site, and with the other hand holding a suction device to remove excess fluids, saliva, and blood from the patient's mouth, the nurse, dental assistant ensures a clear working field, facilitating easier and more efficient procedures.

Results: The role of assisting under general anesthesia is somewhat different. The scrub nurse is responsible for preparing the operating room, passing instruments during the procedure, and ensuring all prerequisites are met so that the oral-surgical procedure proceeds without technical complications. A nurse, dental assistant must first and foremost be familiar with the instruments, equipment, and materials, and must have a certain level of knowledge and manual skills to successfully assist with oral-surgical procedures.

Conclusion : Before, during, and after the procedure, the role of the nurse, dental assistant is to check the patient's condition and reiterate post-operative instructions regarding oral hygiene, wound care, and follow-up appointments. The nurse, dental assistant informs the patient, upon waking from anesthesia, on how to behave until the anesthesia wears off and provides the patient with written instructions on oral hygiene until the stitches are removed.

THE ROLE OF NURSES AND TECHNICIANS IN MINIMALLY INVASIVE SPINE SURGERY

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Minimally invasive spine surgery represents a modern approach to treating spinal problems, characterized by smaller surgical incisions, shorter recovery times, and reduced risk of complications. Due to these advantages, many of these operations are performed as day surgeries, allowing patients to return home on the same day of the procedure.

Objective: The aim of this paper is to investigate the role of nurses and technicians in minimally invasive spine surgery, with a focus on their responsibilities before, during, and after the operation.

Methods: This paper is based on a comprehensive analysis of available literature, including studies published in scientific journals and platforms such as SciELO, e-Century, AORN Journal, ResearchGate, Semantic Scholar, NCBI, and other relevant sources.

Results: Before the operation, nurses and technicians prepare patients by collecting medical histories, preparing the surgical field, and ensuring sterile conditions. During the surgery, their assistance to the surgical team ensures optimal conditions for the procedure. Postoperatively, their role includes monitoring vital signs, managing pain, recognizing complications, and educating patients on postoperative care. The use of advanced technologies, such as robotic assistance and modern tools, requires continuous education and adaptation by nurses and technicians. **Conclusion:** Nurses and technicians play a crucial role in minimally invasive spine surgery, contributing to the success of operations and the rapid recovery of patients. Their expertise in preparation, assistance during surgery, and postoperative care, as well as their ability to manage advanced technologies, ensures a high standard of care and optimized outcomes for patients. Ongoing education and research in this field are essential for advancing practice and improving patient quality of life.

COMPETENCES OF NURSES IN DAY SURGERY

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Introduction: Day surgery is defined as admission of selected patients with planned surgical procedures who are discharged from the hospital on the same day.

Goal: Due to this fact, the specificity of work in day surgery requires knowledge and skills that, not only are common to the treatment of hospital patients, but also enable the safe and quick discharge of the patient, which is a necessary for further recovery at home.

Methods: The majority of activities in day surgery must be aimed at optimizing the patient for early and safe discharge, which is achieved primarily through good education and the acquisition of competencies that differ greatly from competencies for working with hospital patients.

Clinical competencies in day surgery can be divided into several categories: clinical competencies during admission (reception) of patients, competencies during admission to the day surgery department, competencies during preparation for anesthesia, competencies during procedures in the operating theatre, competencies during the first phase of postoperative recovery, competencies during the second phase of postoperative recovery and discharge of the patient.

Results: These nurse competencies are necessary for successful work and timely discharge in day surgery.

Conclusion: By acquiring the aforementioned competencies and the necessary knowledge and skills through continuous education, the desired Goal is achieved, which is the highest quality and efficient treatment of patients in day surgery.

SAFETY AND FEASIBILITY OF HYPOSPADIAS REPAIR IN DAY CASE SURGERY

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Introduction: Standardised perioperative protocols in day case (DC) surgery have enabled and facilitated an increasing number of procedures in paediatric population.

Goal: To assess feasibility and safety of DC hypospadias repair regardless of type by using a standardised DC perioperative and postoperative protocol and focusing on peri and post-operative outcomes as measure of success.

Methods: Data was collected retrospectively from the hospital database from January 2023 to December 2023. Data collection included demographics, type of hypospadias, type of procedure, pain management, length of stay, complications, 30-day readmission rates and length of follow-up.

Results: Sixty-two children, median age of 4 years (range 1-15 years) were included in the study. Distal hypospadias was present in 42% of cases, 9% had midshaft, 26% had proximal hypospadias and 21% patients had redo hypospadias surgery. Mathieu and Snodgrass procedures +/- foreskin reconstruction were performed in 54% of patients, straighten and graft (STAG) repair was done in 16%, straighten and close procedure (STAC) in 6% of patients, fistula closure in 13%, foreskin reconstruction in 5% and final urethroplasty (after STAG) had 6% of cases. DC discharge rate was 94%. Postoperatively, 9% of patients with distal hypospadias and 11% with proximal hypospadias developed meatal stenosis or urethral fistula. Six percent required readmission within 30 days.

Conclusion : Any type of hypospadias repair procedure can be performed safely and with good outcomes using a standardised perioperative and postoperative DC protocol. Raising the national standard for DC hypospadias repair promotes good practice and should be the model for future commissioning.

CHILDREN WITH DISABILITIES IN ONE-DAY SURGERY

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Children with disabilities are children who have certain problems that prevent them from certain activities and affect other segments of their development. Children with mental retardation, physical disabilities (visual and hearing impairments, chronic diseases, disability), behavioral problems, learning disabilities (dyslexia, dysgraphia, dyscalculia), multiple disabilities and impairments (several mentioned disabilities) are most often involved. There are more than 24,000 children with developmental disabilities in Croatia.

One-day surgery as a separate medical segment began to develop in Croatia at the end of 2000, and in the 21st century it began to develop to the maximum. A large part of elective procedures are performed through one-day surgery to reduce the child's hospital stay and stress levels.

As an expert member of the medical team, the nurse should be communicative, approachable and create a relationship in which she will enable the patient to express his fears, needs, wishes and expectations without fear or hesitation. The role of the nurse during a one-day surgical procedure of the child, in addition to other professional abilities and skills, is also emotional support in the form of conversation, providing comfort and providing a sense of security. It is extremely important to bring the often very complex medical terminology Conclusion to the child in a way suitable for his age and psychophysical condition. It is also of great importance to explain in great detail step by step all parts of the procedures and interventions that will be carried out on it. The purpose of the paper is to deepen knowledge about the treatment of children with disabilities through one- day surgery. Successful communication is the basis for providing health care. It leads to higher, better standards of health care delivery.

FEASIBILITY OF FASTER DAILY EXCHANGE AND DISCHARGE OF PEDIATRIC PATIENTS IN ONE DAY SURGERY

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Introduction: Number of beds per patient, i.e. per procedure is an everyday topic in every large hospital with a large patient volume. Is there a possibility of increasing procedure volume in spite of having the same number of beds?

Goal: We aim to discuss the possibility of increasing the number of procedures in our One day surgery clinic by concentrating on a strictly set timetable of procedures per day.

Methods: Retrospective analysis of procedures per day during the past post COVID-19 period and projections and analysis of future timetables of procedures.

Results: We have been practicing faster patient flow through our One day surgery clinic over the last few years, mainly concentrating on procedures in local anesthesia. We will show results of our analysis and projections of future organization of patient flow in concordance with the OR and anesthesiology department.

Conclusion : With strictly set procedure timetable, designated One day surgery operating room and sufficient staff at every workstation, it is possible to increase daily workload if all parameters are met.

EXPERIENCES OF CHILDREN AND PARENTS DURING ONE-DAY SURGERY IN OUR INSTITUTION - IS THERE ROOM FOR IMPROVEMENT?

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Introduction: There is a tendency for an increasing number of surgical procedures performed as part of one-day surgery due to the improvement of surgical methods, anesthesiology techniques and methods of analgesia. A child's stay in the hospital is stressful for both the child and the parent. Therefore, it is important to prepare the child for the operation as well as for the stay in the hospital with adequate and timely information. It is also important to inform parents in detail about home care, postoperative pain and possible complications after the procedure.

Goal: The aim is to present feedback from patients and parents of the Department of Pediatric Surgery, KBC Osijek, about their experiences during the one-day surgery stay. The information obtained will also serve to improve the quality of the Department's work.

Methods: We designed a survey with questions that focus on the quality of our services, patient and/or parent satisfaction, postoperative home care and pain relief at home. Patients of the Department of Pediatric Surgery of KBC Osijek are children up to the age of 18, therefore both parents and children responded to the survey.

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POSTERI / *POSTERS*

THE SPINCARE SYSTEM, POTENTIAL SOLUTION FOR BURN INJURY TREATMENT IN DAY SURGERY

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Introduction: 2nd degree burns affecting epidermis and superficial dermis are frequent injuries in children. Treatment can be challenging due to slow wound healing and need for painful dressings change. The Spincare uses electrospinning technology to create porous, multi-layer skin-like matrix of nanofibers that can be applied on burns, minimising the pain. This could be the solution for treating this type of injuries in day surgery wards.

Goal: To evaluate safety and efficacy of Spincare system in treating partial-thickness burns in children and its applicability in Day Surgery settings.

Methods: Medical record of children treated in our hospital with the Spincare during two years period were analysed.

Results: We present a case series of burns treated with the Spincare system. Spincare matrix was applied on the first few days after the accident and stayed on for the full time of the healing process with or without the need for reapplication. Application was painless for the children with the application in the general anesthesia needed for small children due to the lack of cooperability. Most of the procedures were done in Day surgery without the need for rehospitalisation. The healing process lasted from 7 days to three weeks with good cosmetic results.

Conclusion : Burn management remains a challenge owing to slow wound healing, pain, infection, and scarring. Spincare creates a nanofibrous healing matrix which provides easy monitoring, excellent healing, reduces scarring and risk of infection and can be applied in Day Surgery settings.

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ONE-DAY SURGERY AT THE DEPARTMENT OF PEDIATRIC SURGERY, SKB MOSTAR - OUR PREVIOUS EXPERIENCES AND PLANS FOR THE FUTURE

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Introduction: Day surgery or ambulatory surgery consists of admission of the patient, surgical procedure and discharge of the patient in the same working day. This is particularly important in pediatric surgery because it reduces stress and discomfort for children who do not spend the night in the hospital, i.e. in an unfamiliar environment, and the parent stays with them the entire time. At our department of pediatric surgery in Mostar, day surgery has not yet been introduced as a concept in the true sense of the word, but certain procedures have already been done in this way for a long time.

Goal: To determine the number of patients who were admitted, operated and discharged on the same day at the Pediatric Surgery Department of the SKB Mostar in the last 6 months; to analyze age, gender and type of surgery, as well as possible complications

Methods: Retrospective research, patient data collected from the Hospital Information System (BIS).

Results: At our department, in a 6 months period, 90 children were treated : admitted, operated on and discharged on the same working day, and the most common procedures were inguinal hernias and circumcisions.

Conclusion: One-day surgery enables fast, efficient and financially acceptable treatment of patients, especially pediatric patients. The development of surgery and anesthesia has led to new, simpler and in many ways easier approaches to treatment, and one of them is the concept of day surgery or ambulatory surgery. The transfer of our department to larger and modernly arranged rooms will facilitate the introduction of one-day surgery as a separate organizational unit in the near future.

OTOPLASTY IN AMBULATORY SURGERY

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Otoplasty is an operation that corrects protruding ears. The deformity appears in 5% of the population. It can be operated on in children and adults, under general or local anesthesia. In the sixth year of life, the ear reaches 80% of its final size and appearance. In Croatia, this procedure is approved for operation under conditions of ambulatory surgery and as part of an inpatient stay. Up to the age of 18, the basic insurance fully covers the procedure. Occasionally, a report from a psychologist or psychiatrist is required. After the age of 18, the procedure is charged according to the price list.

Due to the better arrangement in ambulatory surgery and the better possibility of planning operations, we believe that it is better to carry out otoplasty surgery in ambulatory surgery.

We will present a comparison of otoplasty performed in the inpatient ENT Clinic of KBC Zagreb and those operated in ambulatory surgery facilities.

In the last 5 years, 98 operations were performed at the ambulatory surgery department of the KBC Zagreb ENT Clinic, of which 82 were performed under general anesthesia and 16 under local anesthesia. The average age of patients operated under local anesthesia was higher than that of patients under general anesthesia. The duration of the operation was shorter in the ambulatory surgery than in the inpatient unit. All patients operated on in ambulatory surgery were discharged on the same day, while the time of hospitalization in the inpatient unit was more than 2 days.

Otoplasty surgery as part of an ambulatory surgery is safe, more cost-effective than in a hospital with a shorter duration of surgery.

ADENOIDECTOMY WITH SUCTION DIATHERMY IN AMBULATORY SURGERY

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Adenoidectomy is one of the most common procedures in otorhinolaryngology. Transoral surgery, with some modifications of instruments, has been performed since the 19th century. At the beginning, the operation was performed without anesthesia in a sitting position. In addition to classic curettage of the nasopharynx, adenoidectomy can be performed with microdebrider, coblator, LASER and molecular resonance.

A method of surgery that is suitable for ambulatory surgery is adenoidectomy with suction diathermy. It has been used for the last 20 years, initially for the purpose of hemostasis after curettage, later also as a separate technique.

Visual control can be enabled with a laryngeal mirror or endoscope transorally. Tissue liquefaction is performed with monopolar diathermy and the adenoid tissue is simultaneously removed by suction. The procedure is finished when the choanae are clearly visible and the nasopharynx has a smooth contour.

The advantages of this method are a clear view of the adenoid tissue and the nasopharynx, a bloodless and clearly visible operative field, the possibility of controlled removal of adenoid tissue while sparing the surrounding structures and a minimal increase in the cost of the procedure. The disadvantages of the method are the impossibility of pathohistological analysis, the longer duration of the procedure, postoperative halitosis and the potential danger of thermal injuries to the surrounding structures.

Compared to the classic method of adenoidectomy, studies have shown that suction diathermy is equally successful in eliminating the symptoms for which surgery is indicated, there is less intraoperative blood loss and a lower incidence of postoperative bleeding. There is an equal incidence of revision adenoidectomies due to the regrowth of vegetations that cause symptoms. A lower risk of postoperative complications of Eustachian tube mouth stenosis and velopharyngeal insufficiency has been proven. Suction diathermy is a safer technique in patients with known coagulation disorders.

NAIL POLISH USED BY HEALTHCARE PERSONNEL DOES NOT INCREASE THE RATE OF HEALTHCARE-ASSOCIATED INFECTIONS

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Introduction: Healthcare-associated infections (HAIs) are any infections patients acquire through any healthcare intervention. These include infections associated with medical devices and instruments, mostly (catheter-associated urinary tract infections, ventilator-associated pneumonia, central line-associated bloodstream infections, complications following surgery (mostly surgical site infections-SSI), transmission between patients and healthcare workers, and antibiotic overuse.

Goal: Nail polish has been accepted as a cause of HAI for decades. Although it is labeled as a cause in the latest update of "Practice recommendations" from 2022 of the Society for Healthcare Epidemiology, Infectious Diseases Society of America, Association for Professionals in Infection Control and Epidemiology, and American Hospital Association, the guidelines are based on the results of a single original study. We tried to collect recent data on HAIs and nail polish.

Methods: We collected all recent original articles about nail polish and HAIs during the last 10 years (2014-2024).

Results: A small number of studies was performed during a 10-year period. The results show "reductions in the bacterial burden of natural nails and standard polish, but not gel polish ($P = .001$, $P = .0028$, and $P = .98$, respectively) were seen after hand hygiene. All three nail types become more contaminated with bacteria over time. Standard polish and natural nails may be more amenable to hand hygiene than gel polish". Another result was "The risk of growing a pathogenic microorganism after hand disinfection due to nails coated with a conditioner or a hybrid varnish was similar to that of natural nails". The third study showed "no difference in SSI rates between procedures performed by staff wearing nail polish (1.3%) and those performed by staff without nail polish (2.8%, $P = .155$)."

Conclusion: The available data suggest that some types of nail polish do not interfere with the effectiveness of routine hand hygiene or surgical scrubbing. The nail polish industry has advanced in the last few decades, and the quality and smoothness of these products may not reduce the effectiveness of hand hygiene or increase the risk of HAIs.

SPECIFICITY OF ANESTHESIA FOR DENTAL PROCEDURES IN ONE-DAY SURGERY

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Introduction: General anesthesia (GA) in dentistry is mostly used in children and adults with mental disabilities and/or the autism spectrum. Nevertheless, it is also used for major oral surgery procedures where patient needs to be still or in healthy patients with dental anxiety/phobia.

Goal: Parents and medical staff cooperation is necessary from the beginning of the process. The first obstacle encountered is the placement of a venous line. It is important that an experienced anesthesiologist and medical technician participate in this procedure, and the venous line is set up with human restraint of the patient and short-term inhalation anesthesia. Another option is nasal mucosal atomization device (MAD) which ensures a quick and painless delivery of sedatives (e.g. Midazolam or Dexmedetomidine) before going to the operating room (OR). What is generally neglected in anesthesia is target controlled infusion (TCI), while in our institution it is most often used for induction of GA and its maintenance. TCI is a technique of intravenous drug administration using an infusion pump in which we aim for a predictable concentration of the drug in a certain part of the body based on the patient's parameters. This technique enables controlled and easier

sedation, avoiding the cumulative effect of the drugs used. The drugs we use for TCI are Propofol and Remifentanyl. Another specificity is nasotracheal intubation with pharyngeal tamponade. In addition to expected complications and difficulties, such as epistaxis and septal deviations, one should also take into account possible anatomical malformations in patients with certain syndromes, and one should definitely prepare for possible difficult intubation. For monitoring, classic non-invasive monitoring is used, which includes ECG, SpO₂, NIBP, etCO₂ with the addition of entropy. The system calculates the spectral entropy of the electroencephalogram (EEG) signal, on the basis of which we monitor the patient's alertness and adjust the amount of medication in cooperation with dentists and by assessing the duration of the procedure. After waking up, patients go to the recovery room where they stay for at least 2 to 3 hours with their escort and continuous monitoring of vital functions, after which they are discharged home.

Conclusion : It is important to prepare adequately for such patients and keep in mind the possibility of various coagulopathies. Also, nowadays there is an increasing influx of healthy patients with dental phobia.

WHAT MAKES PARENTS OF PATIENTS IN DAY SURGERY SATISFIED? – 6 MONTH ONLINE SURVEY

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Introduction: Day surgery at the Department of pediatric surgery in Clinical Hospital Center Rijeka advanced with the formal establishment of the Department for pediatric day surgery in 2017. Since then, the catalogue of possible procedures increased. Moving to a new hospital building got us not only a new address but a separate ward entrance, patient room only for ambulatory surgery patients and specialized beds. This was a crucial step in evolving our one-day surgery practice, so that we can provide more approachable, better and faster care for our patients. Further improvement of the treatment could be in innovations based upon opinions of our patients and their parents.

Goal: Our aim was to measure the satisfaction of our patients' parents with one-day surgery model and their short stay at our hospital.

Methods: We used an online survey that we sent by email to the parents of our patients treated through day surgery over a period of 6 months. In the survey we included age, sex, operative diagnosis, overall parent satisfaction, fear of same day discharge, patient satisfaction, pain management, wanting to postoperatively delay patient discharge and how did the parents get to know about one-day surgery. We gathered response from 137 parents.

Results: The results were extracted with Excel.

Conclusion : To conclude, the online survey showed overly positive feedback from the patients parents. Most positive was the short in-hospital stay without overnight sleeping, fast recuperation, pain management and fast return to normal activities. In the future we aim to add more operating indications, separate staff to improve comfortable stay at our one-day surgery ward.

LAPAROSCOPIC RECTOPEXY AND SPHINCTEROPLASTY FOR BEDRIDDEN PATIENT WITH RECTAL PROLAPSE: A CASE REPORT

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Introduction: In elderly patients, rectal prolapse can result in significant discomfort. The gold standard of care for elderly patients is a perineal approach. The introduction of laparoscopic rectopexy opens the possibility of performing different fixation techniques of the rectum, significantly decreasing morbidity.

Goal: The success obtained from laparoscopic rectopexy to treat prolapses may be a surgery of choice for its low morbidity even in elderly patients with debilitated conditions.

Methods: A 78-year-old female suffering from Alzheimer's disease presented to the surgery department with a long history of rectal prolapse. Heteroanamnestically, the patient has had an operation performed on the uterus in the past. Locally, a larger rectal prolapse was found during the clinical examination. The sphincter was very weak in tone and the patient had difficulties with contracting the sphincter voluntarily. Preformed MSCT of the abdomen and pelvis and colonoscopy did not show any pathomorphological changes of the colon but rectal prolapse.

Results: After insertion of working trocars, the rectum was mobilized by incision of the peritoneum up to the rectovaginal space. The mesh was fixed to the rectum and the promontory with additional fixation with tuckers. Sphincteroplasty was performed with incisions at 3, 6, and 9 o'clock with prolene sutures.

Conclusion: The patient was discharged in good general condition and recovered without complications during the follow-up period. Laparoscopic rectopexia with sphincteroplasty may be the surgery of choice for elderly patients with debilitated conditions.

SCALP METASTASIS AS AN INITIAL PRESENTATION OF PULMONARY SARCOMATOID CARCINOMA: A CASE REPORT

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Introduction: Pulmonary sarcomatoid carcinoma (PSC) is an uncommon form of non-small cell lung cancer, accounting for less than 1% of all lung cancer cases. Approximately 1% to 12% of lung cancers can disseminate to the skin. Cutaneous involvement, specifically in PSC, is a relatively rare occurrence in modern literature.

Goal: Document and highlight a rare case of pulmonary sarcomatoid carcinoma (PSC) which has initially presented with metastasis to the scalp.

Methods: A 58-year-old female presented to the surgery department with a 1-month history of a slow-growing, painless nodule in her scalp. Despite her extensive smoking, she had never had a lung illness before. A painless, moveable, nonulcerated lump measuring approximately 0.6 × 1.2 cm was found in the scalp during the clinical examination. Histopathological examination of the material revealed anaplastic cancer with sarcomatoid characteristics. A chest X-ray revealed a 1.8 cm oval shadow in the left lower lung field. Following that, CT revealed a primary neoplastic process in the lingula, spreading to the left hilar lymph node and one mediastinal lymph node, along with an osteolytic lesion and a fracture of the 4th rib.

Results: Over the next two years, the patient underwent 16 cycles of chemoimmunotherapy. Unfortunately, she passed away due to widespread tumor metastases in the abdomen.

Conclusion : Although solitary scalp metastasis as the first sign of non-small cell lung cancer is rare, metastatic skin conditions should be considered in patients with a history of smoking.

THE ROLE OF THE HOSPITAL PHARMACIST IN THE SAFE PREPARATION OF LOCAL ANESTHETICS

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INTRODUCTION: The hospital pharmacist plays an important role in the preparation of local anesthetics used for surgical procedures. At Varaždin General Hospital, the preparation of local anesthetics is carried out by masters of pharmacy and pharmaceutica technicians with experience working in aseptic conditions.

OBJECTIVE: Aseptic preparation is particularly important with parenteral drugs, where the risk of infection is high if contamination occurs. The goal of aseptic preparation is to ensure that the final product is sterile and safe for patient use.

METHODS: Alleviating the pain associated with local anesthetic injections prior to surgical procedures is one of several primary goals the plastic surgeon. Although there is no ideal solution for local anesthesia for all applications, the combination of lidocaine, bupivacaine and adrenaline has shown excellent versatility in plastic surgery. Aseptic preparation of medicines the process of preparation in a way that prevents contamination by microorganisms. This is critical in the pharmaceutical industry, hospitals and healthcare facilities to ensure patient safety and drug effectiveness. Preparation of local anesthet is done in "clean rooms" using aseptic preparation technique using sterile gloves, clothes and equipment. Staff who prepa medicines must follow strict rules of hygiene, including thorough hand washing and use of sterile clothing. Each step in preparation must be performed in a manner that minimizes the risk of contamination, including the use of sterile techniqu when handling drugs and packaging.

RESULTS: In the hospital pharmacy, the preparation of local anesthetics began in validated aseptic conditions from March 2024.

CONCLUSION: Through continuous education of hospital pharmacists and investment in the development of pharmaceutical technology we influence the improvement of the quality of health care, and thus strengthen the role of the hospital pharmacist in the treatment of patients.

DAY SURGERY IN CROATIA AND EUROPE: COMPARATIVE ANALYSIS AND BEST PRACTICES

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Introduction: Day surgery, which allows patients to return home the same day after a procedure, is becoming an increasingly important segment of healthcare. Comparing practices in Croatia and Europe helps identify key trends, best practices, as well as challenges and opportunities for improving this treatment model.

Aim: The aim of this review is to compare the practice of day surgery in Croatia with that in European countries, to identify key trends, best practices, and to recognize challenges and opportunities for enhancing this model of healthcare in Croatia.

Methods: For the purpose of this analysis, a comprehensive search of scientific literature and reports published in the last ten year was conducted using databases such as PubMed, Scopus, and Google Scholar. The search included keywords such as "day surgery," "ambulatory surgery," "Croatia," and "Europe." Data related to organization, efficiency, costs, patient satisfaction and treatment outcomes were analyzed.

Discussion: Day surgery practices vary significantly across Europe. Scandinavian countries, the United Kingdom, and the Netherlands have well-developed systems with specialized centers and standardized protocols. In Croatia, this model is still developing with better organization seen in larger urban hospitals. European countries report significant cost savings and increased healthcare system efficiency, while Croatian patients show high satisfaction due to quick return home and low complication rates. Key challenges in Croatia include the lack of specialized equipment, the need for additional staff training, and the adaptation of existing protocols.

Conclusion: Day surgery in Croatia has the potential for significant progress through the implementation of European best practices. I recommended to increase investment in infrastructure, staff education, and the development of standardized protocols. Further research and international cooperation can additionally improve the quality and sustainability of this care model, leading to better treatment outcomes, increased patient satisfaction, and reduced healthcare system costs.

TAR IN GIANT INCISIONAL HERNIA

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Introduction: We present a case of giant ventral incisional hernia, where a favorable outcome was achieved with Transversus Abdominis Muscle Release technique (TAR), in a contaminated environment without perioperative complications and recurrence after 40 months, with the placement of inexpensive non-absorbable 'Paha' mesh.

Goal: To show shows that even the most challenging abdominal wall hernias can be reconstructed with TAR.

Methods: A 70-year-old man, who had undergone two previous operations presented with a giant incisional hernia. The rectus defect in the umbilical region was 20 cm in the transverse direction wide and 20 cm in the vertical direction and a defect area of 400 cm² with the bowel adherent to the skin. We were compelled to resect approximately 15 cm of the intestine tenui and constructed a T-T anastomosis, alert to the risk of the operating field contamination. Two non-absorbable, monofilament polypropylene mesh sized 30 x 30 cm were placed retro muscular.

Results: The problem of extending the dissection from the rectus abdominis muscle to the lateral compartment was resolved by Novitsky et al. Mesh is placed sublay and perforators to the rectus muscle are preserved. TAR could be an ideal hernia repair technique for complex defects because it weakens the lateral sides of the abdominal wall to augment the midline repair, thereby also increasing the lateral abdominal wall compliance and reducing the pressure on the midline.

Conclusion: Our case shows that even the most challenging abdominal wall hernias can be reconstructed with TAR. It is a safe, effective, and reliable technique with low perioperative morbidity (reduced risk of skin necrosis and surgical site infection).

SEVEN YEARS OF A DAY SURGERY AT THE DEPARTMENT OF PEDIATRIC SURGERY IN CLINICAL HOSPITAL CENTER RIJEKA (2017.-2024.)

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Introduction: The start of one-day surgery at the Department of pediatric Surgery in Clinical Hospital Centre Rijeka was in 2017 by contracting a special infirmary for one-day surgery. After including a sufficient number of criteria for work, our first patient was operated on 14.03.2018.

Goal: The number of procedures, new treatment methods and new diagnoses that we carry out through day surgery is increasing every year. The laparoscopic operations are also part of our operative program

Methods: From only 38 patients operated through day surgery in 2018, we have seen a continuous increase in the number of patients, even during the COVID-19 pandemic.

Results: Until 01.07.2024., 853 children were operated on through the day surgery. The share of operations from day surgery in the total number of operations per year was 3.61% in 2018. In the first 6 months of 2024 this share was 30.44%. The most frequently operated diagnosis is phimosis (46.54% or 397 patients), followed by osteosynthetic material extractions (11.61% or 99 patients), inguinal hernias (10.1% or 83), operations of cryptorchidism (9.49% or 81), minor surgical interventions, "e.g." removal of a mole or atheromas (6.92% or 59) and operation of hydrocele (6.1% or 52). Postoperative complications ("e.g." bleeding, hematomas, postoperative febrility) were recorded in 1.41% (12 patients).

Conclusion: In April 2024, the Department of pediatric surgery has moved to the new hospital building. Our new ward has many improvements provided specially for day surgery patients, with highest standards of health services, which has reflected on the satisfaction of parents and patients.

SEDATION WITH NITRIC OXIDULUS DURING DENTAL PROCEDURES AT CLINICAL CHILDREN

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Procedure for the use of inhalation sedation with nitric oxide at dental procedures recognize it as a safe and effective method of reducing anxiety in children in dental medicine. The indication is set by a dental doctor, a specialist pedodont. The use of sedation will be indicated in children who need to be performed therapeutic dental procedures, which are unable to cooperate due to extreme fear of therapeutic dental procedures. The use of inhaled sedation with nitric oxide causes drowsiness and relaxation, the patient is awake and contactable during sedation, which allows cooperation. In the Clinical Hospital Center Zagreb, starting in January 2024, about 40 sedations were performed.

The main focus when applying the nitrogen oxide sedation process in providing health care is the safety of the patient. Psychological preparation of the patient is required and escorts, in children, usually parents. Then, preparation of forms for documentation, preparation clinic area, checking the correctness of the apparatus for the application of nitrogen oxide and oxygen with gas bottles, preparation of dental instruments, materials and medicines. Procedure sedation requires continuous monitoring of the patient's response to physical stimuli by stimulation and verbal contact, as well as monitoring of vital functions and saturation of arterial blood oxygen. Assisting the doctor contributes to the implementation of the procedure in a shorter time.

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