

# AMBULATORY SURGERY

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Editorial

Mark Skues

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# Editorial

*Mark Skues, Editor-in-Chief*

The 15th World Congress of the International Association of Ambulatory Surgery took place in Oslo, Sweden, from 13th to 15th May, 2024. The conference was hosted by the Norwegian Ambulatory Surgery Organisation in partnership with the IAAS. Thanks are particularly due to Mads Moxness and Mariann Aaland for their diligence and enthusiasm in organising the meeting, with all of the other members of the Scientific and Organising Committees.

This edition of *Ambulatory Surgery* contains copies of the abstracts that were submitted to the meeting, for your perusal. I hope that you find it both useful and interesting.

**Mark Skues**  
Editor-in-Chief



# Limiting Factors for Daycare Laparoscopic Cholecystectomy In a Rural Setup In India

Amit Kumar Gupta, AIIMS, Raebareli, India

## Aims

The purpose of this study is to find out whether it was safe and feasible to discharge elective laparoscopic cholecystectomy patients as daycare (6 hours) in a centre like ours where there is no dedicated unit for ambulatory surgery and to determine the factors affecting discharge.

## Methods

It is a retrospective analysis of prospectively collected data. The study was conducted in the Department of General Surgery in a rural healthcare setup.

## Results

Total of 145 patients underwent elective laparoscopic cholecystectomy (ELC) during the said period. The mean age

is 39.6 years. 125(86%) patients were dischargeable according to the modified Alderete score at 6 hours. duration of surgery (p-value-0.001), Occurrence of postoperative nausea and vomiting(p-value-.002), Critical view of safety visibility (p-value-.03) and need for foley's catheterization(p<0.001) have significant associations with dischargeability at 6 hours.

## Conclusions

Elective laparoscopic cholecystectomy surgery as a daycare procedure has its own advantages. the daycare procedures may be equally effective for performing elective surgeries and hospitalization may be required in very selected cases. However, case selection should take care of patient and logistic factors.

# Analysis of humanistic care ability of day surgery nurses in Sichuan Province – a mediation effect model

Yuchen Zhang, West China hospital, Sichuan University

## Aims

To investigate the caring ability inventory of day surgery nurses in Sichuan province, and analyze the mediating effect of resilience between CAI and nurse-patient relationship, in order to provide theoretical basis for improving nursing services and patients' medical experience.

## Methods

A total of 567 day surgery nurses from four general hospitals in Sichuan Province were selected. Convenience sampling method was adopted, questionnaire survey conducted from November 1 to November 15, 2023, using general questionnaire, CAI, CDRISC and NPRS-C. The single factor, correlation and mediating effect of CAI were analyzed.

## Results

The total score of CAI was  $193.640 \pm 22.910$ , the score of resilience was  $92.394 \pm 17.132$ , and the score of NPRS-C was

$45.112 \pm 7.999$ . The results of univariate and multiple linear regression analysis showed that, Gender ( $p < 0.05$ ), whether you are the only child ( $p < 0.05$ ), whether you voluntarily choose nursing care ( $p < 0.05$ ), physical condition ( $p < 0.05$ ), physical exercise ( $p < 0.05$ ), educational background ( $p < 0.05$ ), professional title ( $p < 0.05$ ), position ( $p < 0.05$ ), whether received humanistic training ( $p < 0.05$ ) was an influential factor in nurses' humanistic care ability. Through the mediation effect test, it is found that resilience plays a mediating effect on CAI and NPRS-C.

## Conclusions

Nurses' human caring ability in Sichuan province is at the middle level. In order to improve the satisfaction of nurses and patients, the humanistic caring ability can be improved by improving the level of psychological resilience, so as to improve the satisfaction of nurses and patients.

# Unidirectional valve apparatus improved non-dependent lung collapsing during one-lung ventilation in daytime thoracic surgery: A prospective randomized controlled trial

Peng Liang, Min-yu Tang, Hong Wu, West China Hospital, Sichuan University

## Aims

Good collapse of the nondependent lung is very important for thoracic surgery, especially in day surgery patient. While passive ventilation because of mediastinum movement from dependent lung ventilation results in tidal movement and affects nondependent lung collapsing during one lung ventilation (OLV). We assumed that unidirectional valve apparatus, blocking room air entry into independent lung would improve lung collapsing.

## Methods

**Design:** A prospective randomized controlled trial.

**Patients:** 60 patients with double lumen tubes (DLTs) for thoroscopic day time surgeries in day surgery ward or thoracic surgery ward were randomly divided into two groups (conventional OLV, COLV; unidirectional valve OLV, UOLV).

**Interventions:** In the UOLV group, the distal port of the nondependent lumen of DLTs was connected with a unidirectional valve apparatus which gas only goes out but not in.

**Measurements:** The primary outcome included lung collapse score at different setting points by a verbal rating scale scored from 0 to 10, and the duration from pleural opening to satisfactory lung collapse. Secondary outcome included intraoperative and postoperative complications.

## Results

Duration from pleural opening to satisfactory lung collapse was significantly shorter in the UOLV group, with the median lung collapse time 3 (1-5) minutes in UOLV group vs. 5 (5-9) minutes in COLV group,  $P=0.003$ . At 0, 5 and 10 minutes after pleural opening, lung collapse score in the UOLV group was higher than COLV group. None of patients showed related complications include intraoperative hypoxemia and PPCs.

## Conclusions

The unidirectional valve apparatus can improve nondependent lung collapsing during OLV, and do not affect intraoperative and postoperative complications.

# Case Series: Combined mastectomies and hysterectomy for gender-affirmation at an ambulatory surgery center

Kelly Lebak, MetroHealth Medical Center

Gender-affirming care for patients with gender dysphoria can include bilateral mastectomies (“top”) and hysterectomies (“bottom”) for transgender males or non-binary patients. Our ambulatory surgery center (ASC) does these two procedures as one combined case. To our knowledge, this is the first reported case series of these two combined procedures at an ASC.

## Aim

To describe our experience doing these combined cases and the incidence of adverse outcomes including hematomas, readmissions, deep vein thromboses (DVTs), postoperative nausea and vomiting (PONV), etc.

## Methods

Eight patients between April 2022 and December 2023 were identified via a retrospective chart review.

## Results

Common comorbidities, in addition to gender dysphoria, including anxiety, depression, attention deficit hyperactivity disorder, tetrahydrocannabinol (THC), and tobacco use. The average age, body mass index, American Society of

Anesthesiologists (ASA) physical status score, total anesthesia time, and total post-anesthesia care unit (PACU) time were 30 years old, 25kg/m<sup>2</sup>, 2, 275 minutes, and 120 minutes respectively. Five

of eight patients had preoperative oral pain medication. Three of the eight patients required rescue PONV medication in the PACU, and the average pain score at discharge was 2.75/10; none had postoperative surgical hematomas, DVTs, or required admission though multiple patients had surgical concerns that required a phone follow-up.

## Conclusions

This small case series describing combined top and bottom surgeries for gender affirmation at an ambulatory surgery center shows that with proper patient selection, it can successfully be done. Future work may focus on shortening PACU times and allowing for higher ASA score patients.



# Clinical application analysis of spinal endoscopy in the treatment of lumbar disc herniation in centralized management of ambulatory surgery mode

Yuguang Niu

## Aims

To investigate clinical application effectiveness of percutaneous endoscopic lumbar discectomy for lumbar disc herniation in centralized management of ambulatory surgery mode.

## Methods

A total of 139 patients in the Department of Orthopedics of the hospital who underwent percutaneous endoscopic lumbar discectomy from January to June in 2017, and met the selection criteria was retrospectively analyzed, including 107 cases of centralized management of ambulatory surgery mode (observation group) and 32 cases of regular surgery (control group). Hospitalization expenses, hospitalization stay, hospital bed utilization rate, preoperation waiting time, operation time, intraoperative bleeding, complication rate and satisfaction were analyzed between the two groups.

## Results

Hospitalization expenses and stay, preoperation waiting time of observation group were significantly lower than those of control group ( $P < 0.001$ ), Hospital bed utilization rate and patients satisfaction were significantly higher than the control group ( $P < 0.05$ ). There were no significant differences in operative duration, intraoperative blood loss, complication rate, recurrence rates, VAS score and ODI score at admission and discharge between the two groups ( $P > 0.05$ ).

The safety and efficiency of percutaneous endoscopic lumbar discectomy performed in centralized management of ambulatory surgery mode were comparable to that performed in regular setting. The centralized management of ambulatory surgery mode can significantly shorten average hospital stay and preoperation waiting time, reduce hospital expenses, and improve the patients' satisfaction.

# The Laryngeal Gel Mask Airway – a new airway device

Paul Zilberman, Hadassah Hospital, Jerusalem, Israel

## Aims

Proposing a hybrid airway device

## Methods

Developing device

## Results

In a dummy model performed perfectly

## Conclusions

The Laryngeal Gel is a new airway device combining the distal cuff of an iGel with the shaft/handle of a regular LMA. The distal cuff was modified such that it allows the insertion of any age adapted device down the esophagus. The modification consists in two C-shaped channels on the rear part of the cuff. Those channels form a "V" shape that converge at the tip of the cuff.

The lack of an inflatable cuff, the easy maneuverability of the shaft and the familiarity of any anesthesiologist with both original devices provide a possible rapid learning curve.

Conceived initially only for the gastroscopic examinations, this new device could be used for a large variety of other examinations (TEE for example) and even as a regular conduit in elective surgeries like any other SGD.

The device has been patented and is in advanced stages of manufacturing of the first batch, pending clinical evaluation. If successful, the Laryngeal Gel Mask will most probably replace both the LMAs, including the second generation ones and the iGels. Due to its simplicity and ease of use the new device may be a very suitable option for day care surgery, including from the cost-effectiveness standpoint.

# The Preoperative Anxiety Status and Its Influencing Factors in Gynecological Patients Undergoing Consecutive Day Surgery

Lijuan Xu Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu 611731, China

## Aims

To investigate the anxiety status among gynecological patients undergoing consecutive day surgery during preoperative waiting period and analyze its influencing factors.

## Methods

Convenience sampling method was adopted to recruit patients undergoing gynecological day surgery from August 2023 to October 2023 of a tertiary hospital in Chengdu. The Amsterdam Preoperative Anxiety and Information Scale (APAIS) was used to assess the level of preoperative anxiety. The influencing factors were analyzed by using multi-factor logistic regression.

## Results

A total of 460 questionnaires were sent out and 456 valid questionnaires were collected. The average age of patients was  $34.38 \pm 7.86$  years of which 36.84% (168 patients) were anxious before surgery. Multi-factor logistic regression analysis showed

that age, familiarity with day surgery, quality of sleep before surgery, satisfaction of family monthly income, experience of surgery or anesthesia, have children and other diseases were influencing factors of preoperative anxiety in gynecological patients undergoing consecutive day surgery during the waiting period.

## Conclusions

The incidence of preoperative anxiety was moderate among gynecological patients undergoing consecutive day surgery. The medical staff in the gynecological day surgery center should focus on patients 30 years old, with poor sleep before surgery, unsatisfactory with family monthly income, negative surgery/anesthesia experience and have other diseases, and adopt various forms of preoperative education and psychological intervention to relieve their preoperative anxiety.

# Ambulatory Surgery for unilateral inguinal and umbilical hernias with bilayer meshes (PHS & UHS): learnings from 1293 surgeries

Rajeev Premnath, Ramakrishna Hospital Bangalore India

## Aims

Day care or ambulatory surgery is a common entity to surgeons since time immemorial, it has re-evolved into a surgical specialty the world over. The patients and the procedures are selected in such a way so as to cause minimal harm or disturbance to the patient and his life and to get the best outcomes.

## Methods

A retrospective data collecting study was conducted on 1293 patients at the department of surgery, Ramakrishna Hospital, Bangalore, India for the duration of 11 years. Patient's history was taken regarding the presenting complaint, its duration, comorbidities and physical examination was done. Investigations for pre operative evaluation and imaging were also done. Appropriate anaesthesia was chosen and post-operative follow up was done.

## Results

None of the 1293 patients had major immediate complications. Minor immediate post operative complications were noted in 23 out of 1293 patients. 70 patients had to stay for more than 23 hours and 7 patients had to be re-admitted post discharge. 93% of hernia patients were satisfied with the concept of day care surgery, thus proving its acceptance.

## Conclusions

Day care surgery is suitable for patients of all adult age groups as seen in our study for inguinal and umbilical hernia management. The advantages of reduction of hospital stay, less post-operative pain and greater satisfaction, warrant day care hernia as a main stream advise to uncomplicated umbilical and inguinal hernia treatment.

# First-Year Outcomes of Thailand's New Ambulatory Protocol for Laparoscopic Cholecystectomy: A Cohort Study Using Propensity Score Analysis with Inverse Probability Treatment Weighting

Suppadech Tunruttanakul, Department of Surgery, Sawanpracharak Hospital

## Aims

In Thailand, the experience with advanced ambulatory surgeries remains limited. Given the limited supporting resources, this study reports on the outcomes of a newly implemented (year 2022) Thai protocol for laparoscopic cholecystectomy.

## Methods

A retrospective cohort study at Sawanpracharak Hospital (a regional tertiary hospital) analyzed elective laparoscopic cholecystectomy cases from May 2022 to June 2023. Exclusions included patients under 15, those needing concurrent complicated procedures, and unsuitability for ambulatory surgery. Variables collected were age, sex, body mass index, American Society of Anesthesia status, indications for surgery, additional non-complicated intra-operative procedures, and conversion to open surgery. Primary outcomes were 30-day readmission, morbidity, and mortality, with secondary outcomes including hospital stay length and pain management. Variable distribution was analyzed. Outcome comparisons utilized the propensity score method with inverse probability treatment weighting. Post-

weighting covariate balance was evaluated using Kernel density plots and mean standardized difference calculations.

## Results

292 patients were included (94 ambulatory). Kernel density plots and mean standardized differences confirmed the covariates balance after propensity score weighting. The ambulatory and conventional overnight stay approaches showed no differences in readmission rates and complications, with no mortality. The risk ratios (confidence intervals) for readmission and complications were 1.38 (0.31, 6.22) and 0.66 (0.13, 3.45), respectively. The ambulatory surgery group experienced significantly shorter hospital stays and reduced requirements for intravenous analgesia: -2.14 days (confidence interval: -2.35, -1.93) and -2.66 times (confidence interval: -3.85, 1.48), respectively. In a setting with limited resources for ambulatory surgery, the ambulatory laparoscopic cholecystectomy reduced hospital stay with comparable readmission and morbidity.

# The Feasibility of Day Case Cochlear Implant Surgery

Jianan Li, Chinese PLA General Hospital

Day case surgery offers benefits including reduced hospital stays, improved patient satisfaction, and potential cost savings. However, concerns remain about safety and feasibility, particularly in younger pediatric patients.

Day case surgery appears feasible and safe in adult populations, with high discharge rates and low complication rates. A UK retrospective review found 26/76 patients (34%) were discharged same day, with no readmissions. An Italian study of 43 patients found 32/43 (74%) were discharged within 24 hours, and only 1 admission for infection. A German study of 20 patients reported 19/20 (95%) were discharged within 24 hours, with 1 readmission for infection.

However, experience is more limited in children. One study found 11/14 (79%) pediatric patients were discharged same day, with no readmissions. Another study found 2/3 (67%) pediatric patients underwent day case surgery, with 1 readmission for infection. Younger age and lack of comorbidities may increase

safety and lower risk of complications. Shorter operative times and avoidance of general anesthesia also help enable same day discharge. However, developmental abnormalities and complex cases may still require admission.

Furthermore, patients undergoing day case surgery returned to work/school significantly sooner than inpatients, and there are no difference in hearing outcomes between day case and inpatients.

## Conclusions

Overall, day case cochlear implantation appears a reasonable option for many patients, with some safety and feasibility concerns remaining, particularly in children. More researches are needed to better understand the benefits of reduced hospital stays and improved quality of life make day case cochlear implantation worth further evaluation.

# First world use of The Laryngeal Mask Airway Gastro (LMAG) in bariatric surgery

Paul Zilberman, Hadassah Medical Center, Jerusalem, Israel

## Aims

To demonstrate the feasibility of the LMAG in this type of surgeries

## Methods

The use of the LMA in overweight patients in general is controversial. More and more body of literature proves that if the patients are carefully selected any supra glottic device (SGD) can be used.

I used the LMAG as a regular LMA and conducted the anesthesia identically as with an endo tracheal tube (ETT), in five consecutive surgeries.

After the usual iv induction a weight adapted size LMAG was inserted without using non depolarizing muscle relaxant (NDMR). Manual ventilation was checked. If deemed appropriate the mechanical ventilation (MV) was started using VCV with the pressure limit set as required by the LMAG manufacturer (Teleflex). The anesthetic gases were only oxygen and sevoflurane.

Only after the MV was deemed appropriate the NDMR was administered. The rest of the anesthesia followed the usual path as with an ETT.

## Results

All five bariatric surgeries were completed without any problems. The surgeons didn't feel any difference compared to the use of an ETT.

A previous poster use of the LMAG in these surgeries belongs to Dr. Adrian Sultana (Australia), but never presented as an article. When I used the LMAG I was not aware of this previous presentation.

Despite the fact that there were only five cases, it appears that the LMAG can offer a faster and reliable way to secure the airways in this type of surgeries. More cases are required to prove safety but as a first step the results are encouraging.

# Safety and Efficacy of Ambulatory Hysteroscopic Suture Fixation of the Levonorgestrel-Releasing Intrauterine System in Women with an Expulsion History: A Prospective Cohort Study

Yuan Ge, Beibei Lin, Gufeng Xu, Yue Wang, Gynecology ward 1, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China, Department of Ambulatory Surgery, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China, Department of Ambulatory Surgery, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China, Department of Ambulatory Surgery, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China

## Aims

The levonorgestrel-releasing intrauterine system (LNG-IUS) is an efficient contraceptive and nonsurgical treatment for gynecological conditions. However, its expulsion rates are concerning. In this study, we suggest the use of non-absorbable suture fixation through ambulatory hysteroscopic surgery to mitigate expulsions and evaluate the safety and outcomes of this procedure.

## Methods

This study included 73 women (average age: 41.34 years) with a history of LNG-IUS expulsion who underwent hysteroscopic suture fixation of the LNG-IUS at ambulatory surgery department of Women's Hospital, Zhejiang University School of Medicine, between August 2022 and August 2023. Postoperative assessment was conducted using electronic questionnaires at 1, 3, and 7 days, along with outpatient follow-ups and ultrasonography at 1, 3, 6, and 12 months.

## Results

The ambulatory surgery team successfully performed 73 procedures with an average duration of  $37.81 \pm 15.42$  min and a mean total hospital stay of  $5.63 \pm 1.31$  h, encountering no complications. Follow-up was conducted for an average of 183.56 days for all 73 patients. Among them, 70 underwent postoperative imaging examinations, primarily ultrasonography, with an average follow-up imaging time of 117.33 days. This study revealed low expulsion (4.29%) and downward-shift (7.14%) rates. The primary adverse reactions observed were irregular bleeding or spotting in 71.23% of cases and an increased vaginal discharge rate of 8.22%.

## Conclusions

Ambulatory hysteroscopic LNG-IUS suture fixation is safe and effective for reducing expulsion rates in women with a history of expulsion. However, this procedure is associated with higher rates of irregular postoperative bleeding and increased vaginal discharge.

# Outcome Indicators in Ambulatory Surgery – Where do we Stand?

Joana Pinto, Luís Sá, António Amaral, Universidade Católica Portuguesa - Faculdade de Ciências da Saúde e Enfermagem, Porto (PhD Student), Universidade Católica Portuguesa - Faculdade de Ciências da Saúde e Enfermagem, Porto, Escola Superior de Enfermagem de Coimbra

## Aims

Ambulatory surgery (AS) is transforming healthcare delivery. Despite the many advantages underlying AS, little is known about quality of care and how it can be assessed. The proper monitoring of outcome indicators may reveal potential problems, improve the quality of care and sustain the progress of AS. We aimed to map the evidence on which outcome indicators have been used in AS.

## Methods

A scoping review was conducted based on the methodological guidelines proposed by the Joanna Briggs Institute (Peters et al., 2020).

## Results

The database and registers search retrieved 338 and 10 records, respectively. The selection process of the records retrieved from the search followed PRISMA-ScR flow diagram.

Fifteen Outcome Indicators were identified: Staff satisfaction; Patient satisfaction; Pain assessment; Post operative nausea and

vomiting; Mortality and morbidity; Postoperative complications; Surgical site infection; Unplanned re-operation; unplanned re-hospitalization or hospital transfer or same day admission with a length of stay greater than 24 hours (1-30 days)/Unplanned overnight admission or at least one postoperative visit to both primary care and surgical specialty clinics within 30 days; Postoperative emergency department visit within 30 days; Incidence of patient burn; Incidence of patient fall; Incidence of wrong site, wrong side, wrong patient, wrong procedure or wrong implant surgery; Patient's ability to resume normal activities following surgery; Normothermia.

## Conclusions

Implementing improvements in AS requires understanding what metrics exist to assess quality and what challenges need to be addressed. We did not find a consensus regarding the evaluation of some of the identified indicators.

# Total Mastectomy in outpatient surgery with a nursing system for post-ambulatory support and follow-up at home

Ottaviani Marie, Centre Henri Becquerel, Rouen, France

## Aims

Total mastectomy and redon drain have been identified in the literature as limiting factors in outpatient breast cancer surgery. The Henri Becquerel Cancer Centre (CHB) in Rouen, France, has developed a nursing system for post-ambulatory support and follow-up at home called DIASPAD-CHB. Post-operative monitoring involves a home visit from a private nurse on the first evening, and then daily until the drain is removed. The aim of this descriptive, retrospective, single-centre study was to investigate the impact of DIASPAD on the practice of outpatient total mastectomy.

## Methods

Patients undergoing total mastectomy at the CHB were included, from the creation of DIASPAD in 2017 until 2021, regardless of the mode of hospitalisation.

## Results

During the period, 1,186 patients were included, 350 in inpatient hospitalization (IH) and 836 in outpatient hospitalization (OH). The outpatient scheduling rate increased to 81% in 2021. The conversion rate was 5.4%; the rate of revision for haematoma was 3% in both groups ( $p=0.482$ ); and the rate of re-hospitalization at 30 days was 4% in OH versus 1% in IH ( $p=0.001$ ). The average pain reported on Day 1 was 0.22/10 in IH versus 0.48 in OH ( $p<0.001$ ).

## Conclusions

Outpatient mastectomy can be performed without compromising the quality and safety of care. Its success is largely influenced by the adaptation of anaesthesia and the preparation of patients for the return home with a drain. Its feasibility depends on the conviction, collaboration and coordination of healthcare professionals.

# The Effect of Early Suction of Lollipop Candy During Anesthetic Recovery Period on Patients Undergoing Daytime Hysteroscopy for Infertility Evaluation

Chaoliang Tang, Department of Anesthesiology, The First Affiliated Hospital of USTC, Division of Life Sciences and Medicine, University of Science and Technology of China, Hefei, Anhui, 230001, China

## Aims

To evaluate the effect of early suction of lollipop candy during anesthetic recovery period in patients undergoing daytime hysteroscopy for infertility evaluation.

## Methods

A total of 60 patients with infertility undergoing outpatient hysteroscopy under pure intravenous anesthesia from July to December 2021 were randomly divided into two groups of 30 each. The observation group was given lollipop candy for suction when consciousness recovered in the recovery room, while the control group received conventional anesthesia recovery. The preoperative and postoperative anxiety and depression scores, the number of patients crying after surgery, the tolerance of balloon compression, the degree of hunger, the VAS pain score at 0.5 h after surgery, and patient satisfaction with anesthesia were recorded and compared between the two groups. Adverse reactions during anesthesia recovery period were also recorded in both groups.

## Results

Compared with the control group, the observation group showed significantly lower anxiety and depression scores, significantly reduced number of patients crying after surgery, significantly improved tolerance of balloon compression, significantly reduced postoperative hunger, significantly lower VAS pain score at 0.5 h after surgery, significantly increased patient satisfaction with anesthesia ( $P < 0.05$ ), and significantly reduced adverse reactions during anesthesia recovery period such as dizziness, cold sweat and palpitations ( $P < 0.05$ ).

## Conclusions

Early suction of lollipop candy during anesthetic recovery period can significantly reduce anxiety and depression in patients undergoing outpatient hysteroscopy for infertility evaluation, increase tolerance of balloon compression, reduce postoperative hunger and pain, increase patient satisfaction with anesthesia, and reduce adverse reactions during recovery period.

# Decompression As Preoperative Treatment For Unicystic Ameloblastoma

Marko Vuletić, Valentina Brzović Rajić, Igor Smojver, Dražena Gerbl, Luka Marković, Dragana Gabrić, Department of Oral Surgery, School of Dental Medicine, University of Zagreb, Department of Endodontics and Restorative Dentistry, School of Dental Medicine, University of Zagreb, St. Catherine Specialty Hospital, Zagreb, Clinic of Anesthesiology, University Hospital Clinic Zagreb, Private dental clinic, Pula, Department of Oral Surgery, School of Dental Medicine, University of Zagreb

Ameloblastoma, an aggressive benign odontogenic entity with high recurrence rate, is one of the most common odontogenic tumors. It occurs often in the jawbone of young adults with no difference between the gender. The current WHO 5th classification distinguishes five different types of ameloblastoma: conventional/multicystic, unicystic, metastatic, peripheral, and adenoid. Clinical and radiographic presentation include painless facial swelling, cortical expansion, tooth resorption and unilocular/multilocular radiolucency. Delayed diagnosis is made due the lack of symptoms and slow-growing nature. Treatment concept for ameloblastoma is controversial and depending on the clinical feature and type of the tumor might be surgical or non-surgical. The primary method is surgery which can be divided to conservative and radical. Modern surgical approach is to retain jaw function and architecture, despite the higher recurrence rate.

One of the most used methods is fenestration decompression with secondary enucleation and curettage especially effective for treating unicystic ameloblastoma. Purpose of this poster is to present 2 cases of unicystic ameloblastomas of the mandible which were treated with fenestration decompression from period of 6 to 12 months, and in second stage through our ambulatory surgery with curettage. They are in follow-up for 3 years with no sign for recurrence. This concept demonstrated a reduction in size of the initial lesion by new osseous formation after few months after placement of the tube. The presented cases confirmed that decompression with curettage could be efficient treatment option for this type of tumor, although there is obvious need for further research to investigate this fact.

# The impracticalities and challenges in ambulatory surgery for transurethral enucleation and/or resection of the prostate (TUERP/TUEP/TURP) in a Chinese tertiary referral hospital

YUAN Zhengyong, WU Caiwen, YUAN Peng, ZHAI Lei, Dept. of Urology, DUJIANGYAN Medical Center, Dept. of Urology, DUJIANGYAN Medical Center, Dept. of Medical Affairs, DUJIANGYAN Medical Center, Dept. of Medical Affairs, DUJIANGYAN Medical Center

## Aims

The use of ambulatory TUERP is uncommon among Chinese urologists. This study aims to elucidate the specific impracticalities hindering the adoption of ambulatory surgery for TUERP in Chinese medical practice.

## Methods

We retrospectively analyzed consecutive patients who underwent TUERP at our institution from June 2022 to May 2023.

The following parameters were evaluated: time required for preoperative assessments, number of cases with postoperative complications, timing of catheter withdrawal, cases performed by beginner, moderated skilled or experienced urologists, length of hospital stay, and number of patients with same-day discharge resistance.

## Results

Our analysis included a total of 100 consecutive patients. The findings revealed that the time for preoperative assessments was  $2.5 \pm 0.82$  (2-4) days. The length of catheterization

was  $64.7 \pm 12.7$  (22-100) hours. Ten patients required recatheterization, 8 underwent refulguration and 2 had postoperative incontinence. Of all the 100 cases, 23 were performed by beginner, 46 by moderated skilled urologists, and 31 by experienced urologists. In total, 91 patients were reluctant to be discharged on the same day. In addition, the medical insurance doesn't cover preoperative assessments.

## Conclusion

Our analysis highlights the impracticalities and challenges associated with implementing ambulatory surgery for TUERP among Chinese urologists. A lengthy preoperative testing period, surgical complexities, prolonged postoperative care requirements, and patient's resistance of same-day discharge currently list the feasibility of this approach. Importantly, the policy of medical insurance reimbursement for charge of readmission testing and services also play a significant role in hindering the adoption of ambulatory surgery for TUERP at our institution.

# Telemedicine for preoperative assessment, surgical appointments, and preoperative education in gynecological day surgery: An observational analysis

Wang Yueqin 86-15958003772

Differences in cost, time, preoperative education, and patient satisfaction among patients undergoing a second hysteroscopic procedure using remote preoperative assessment, surgical appointment, and preoperative education.

## Methods

Forty-one patients planning to undergo a second hysteroscopic surgery, and selected either telemedicine or face-to-face models for their preoperative assessments, surgical appointments, and preoperative education were included. The data were analyzed using the Mann-Whitney U test and Fisher's exact test.

## Results

The telemedicine group demonstrated significantly lower median travel time (40 min vs. 205 min,  $P < 0.01$ ), time spent in hospital (60 min vs. 155 min,  $P < 0.01$ ), meal time (0 min vs. 60 min,  $P < 0.01$ ), and total time spent (108 min vs. 415 min,  $P < 0.01$ ). Similarly, the telemedicine group had significantly

lower median travel expenses (40 yuan vs. 300 yuan,  $P < 0.01$ ) and meal expenses (0 yuan vs. 135 yuan,  $P < 0.01$ ), and overall, total expenses (255 yuan vs. 837 yuan,  $P < 0.01$ ). 95.2% of the telemedicine group completely understood the preoperative education, compared to 100% who completely understood in the face-to-face group ( $P = 1.00$ ). All patients in the telemedicine group were very satisfied compared to 80% in the face-to-face group ( $P = 1.00$ ).

## Conclusions

Telemedicine may be a feasible and advantageous method for preoperative assessment, surgical appointments, and preoperative education in gynecological day surgery. The application of telemedicine has demonstrated notable time and cost efficiency with high patient satisfaction levels.



# Ultrasound assessment of gastric volume after ingestion of clear fluid in fasted healthy volunteers

Jin-Young Hwang, Junghee Ryu, Hyerim Kim, Jee-Eun Chang, Department of Anesthesiology and Pain Medicine, SMG-SNU Boramae Medical Center, College of Medicine, Seoul National University, Department of Anesthesiology and Pain Medicine, Seoul National University Bundang Hospital, College of Medicine, Seoul National University, Department of Anesthesiology and Pain Medicine, SMG-SNU Boramae Medical Center, College of Medicine, Seoul National University, Department of Anesthesiology and Pain Medicine, SMG-SNU Boramae Medical Center, College of Medicine, Seoul National University

## Aims

Preoperative fasting is important to avoid pulmonary aspiration before general anesthesia. This study aimed to evaluate gastric volume after ingestion of a defined volume of clear fluid in fasted healthy volunteers.

## Methods

Ten healthy volunteers who fasted for 5 hours (5 hours for solid intake and 1 hour for clear fluid) were included. Gastric contents and volume were assessed using ultrasound in the supine position, followed by the right lateral decubitus position over time, every 10 min, after ingestion of 10, 50, 100, 200, and 400 mL of clear fluid, respectively. Gastric volume was calculated via the following equation: gastric volume (mL) =  $27.0 + (14.6 \text{ CSARLD}) - (1.28 \text{ age})$ . A stomach was considered empty if it had no contents or  $< 1.5 \text{ mL kg}^{-1}$  of fluid, and full if the presence of solid content or  $> 1.5 \text{ mL kg}^{-1}$  of fluid was detected.

## Results

Gastric volume was significantly decreased over time within 1 hour after ingestion of different amount of clear fluid in all volunteers (all  $P < 0.05$ ). No full stomach was observed in any volunteers at 1 hour after ingestion of clear fluid.

## Conclusions

In healthy volunteers who received clear fluid up to 400 mL after the 5 hours of fasting, gastric volume was significantly decreased over time, and empty stomach was observed in all volunteers at 1 hour after ingestion of clear fluid. Our results suggest that the 1-hour fasting for clear fluid may be considered in healthy patients before anesthesia; however, further studies are required to support our findings.

# Bichat fat pad in the closure of oroantral fistulas

*Dragana Gabrić, Igor Blivajs, Marko Vuletić, Luka Marković, Dražena Gerbl, Igor Smojver, Department of Oral Surgery, School of Dental Medicine, University of Zagreb; University Dental Clinic, University Hospital Center Zagreb, Department of Otorhinolaryngology and Head and Neck Surgery, University Hospital Center Zagreb, Department of Oral Surgery, School of Dental Medicine, University of Zagreb; University Dental Clinic, University Hospital Center Zagreb, Marković Dental Clinic, Pula, Clinic of Anesthesiology, University Hospital Center Zagreb, St. Catherine Specialty Hospital, Zagreb*

## Aims

The aim of this case series was to evaluate the success of the usage of buccal fat pad for oroantral fistulas closure.

## Methods

Three patients came complaining of drainage through the nose while taking water in the mouth due to different reasons: failed zygomatic implant history, an unsuccessful attempt at previous surgical closure of the oroantral communication after tooth extraction, and oroantral fistula as a result of surgery for a large cyst in the upper jaw and maxillary sinus. CBCT scans for all patients showed generalized haziness of the maxillary antrum which was suggestive of chronic sinusitis. The treatment plan was to do surgical closure using Bichat fat pad (BFP) after following proper antral regime and till clear lavage was achieved.

## Results

The procedures were done under general anesthesia. After raising the full-thickness trapezoidal design mucoperiosteal flap, at the posterior most point of the flap the periosteum was teased open upwards till a bright yellow lobulated mass of BFP was seen popping out. The lobule was gently teased out till sufficient amount to close the oroantral fistula was available. Care was taken not to rupture the capsule of the BFP and the BFP was anchored to the palatal gingival margin and covered with the buccal mucoperiosteal flap and sutured free-of-tension using horizontal mattress sutures. No late complications occurred, and all patients were free of pain or any limitations after the 6-month follow-up period.

## Conclusions

Closure of the oroantral fistulas using BFP is an alternative to the classical buccal or peduncular palatal flap.

# Development of an "Internet +" perioperative management system for day surgery based on patients' needs

*Xu Lijuan, Gan Xiaoqin, Du Xudong, Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu 611731, China*

## Aims

To develop an "Internet +" mobile phone application software used in gynecological day surgery center oriented by patients' needs.

## Methods

Based on previous investigation, literature review, group discussion and expert discussion, a questionnaire was compiled. Using the questionnaire to collect patients needs of mobile phone software, and through brain storms between medical staff and information technological team to determine the contents and functions of the software.

## Results

Patients undergoing gynecological day surgery had high demand of the application software. The contents are

divided into six sections :making day surgery appointment, appointment record, preoperative health education, operation progress inquiry, postoperative health education and follow-up informations. Functionally, it supports patients online perioperative activities such as reserve a day surgery, inspect reservation progress, reports, operation progress and acquire health education, fill in postoperative follow-up investigation questionnaires by clicking on hospital public number .

## Conclusions

The application software developed based on the demands analysis of patients undergoing gynecological day surgery is highly targeted, marking the new entry of "Internet +" model perioperative management in gynecological day surgery center.

# Safety and efficiency of video-assisted thoracoscopic day surgery for lung neoplasms : a single-center retrospective cohort study

Jieqiong Lou, Xumin Hou, Yue Zheng, Bo Ye, Shanghai Chest Hospital, Shanghai Chest Hospital, Shanghai Chest Hospital, Shanghai Chest Hospital

## Aims

This study aimed to evaluate the safety and efficiency of video-assisted thoracoscopic surgery (VATS) performed as day surgery for lung neoplasms.

## Methods

A total of 1043 patients scheduled to undergo VATS were included in this retrospective cohort analysis, comprising 294 patients for day surgery and 749 patients for inpatient surgery. After propensity score matching (1:1), 568 patients were included in the final analysis, with 284 in the day surgery group (DSG) and 284 in the inpatient surgery group (ISG).

## Results

The 24 h discharge rate was 43.31% (123/284), and the 48hr discharge rate was 97.54% (277/284) in the DSG. There was no significant difference between the two groups in the incidence of postoperative complications (2.46% vs. 4.23%,  $p=0.243$ ), with prolonged air leaks being the most common complication.

However, the total incidence of anesthesia-related adverse events was lower in the DSG (23.59%) than in the ISG (36.27%), and postoperative pain scores were also significantly lower in the DSG. The day surgery group also showed a shorter median length of hospital stay (1.73 vs. 4.80 days,  $p<0.001$ ) and postoperative stay (1.54 vs. 2.55 days,  $p<0.001$ ), as well as lower total hospitalization costs (47440.30 vs. 57276.89 RBM,  $p<0.001$ ) and significant reductions in drug costs, materials costs and anesthesia costs.

## Conclusions

VATS day surgery can reduce hospital stay and pain, decrease hospitalization expenses, and optimize the use of medical resources while maintaining the same quality of medical care for selected patients. The study results indicate the safety and efficiency of VATS day surgery for lung neoplasms.

# Halved admission time and satisfied patients following minor orthopedic surgeries using Procedural Sedation Analgesia (PSA): a prospective cohort study

Kirsten Boerma-Argelo, Karin Slot, Bianca Bruin, dr. Joyce Benner., Department of Orthopedic Surgery, Northwest Clinics, Alkmaar, The Netherlands, Department of Orthopedic Surgery, Northwest Clinics, Alkmaar, The Netherlands, Department of Ambulatory Surgery, Northwest Clinics, Alkmaar, The Netherlands, Department of Orthopedic Surgery, Northwest Clinics, Alkmaar, The Netherlands

## Aims

To determine whether minor orthopedic surgery using PSA is safe, and to determine its impact on admission time and patient satisfaction.

## Methods

From February through December 2023, patients in need of percutaneous Achilles' tendon lengthening or removal of hardware (for fractures of fibula, clavicle or olecranon, or after tibial tubercle osteotomy) were asked if they were willing to undergo surgery using PSA. All procedures were performed by two physician assistants in an outpatient operating room. Propofol was used for sedation which was administered by a sedation specialist. Postoperative instructions were according to standard protocols. Patients were called by phone one day post-surgery to identify any complications and to assess satisfaction. Patient characteristics, complications, and admission time were compared to control patients who underwent the same procedures in a normal operating room in the preceding year using independent t-tests and chi-square tests.

## Results

Sixty-one patients had minor surgery using PSA. Patient characteristics were similar to control patients (n=62), except for age which was lower in the PSA group ( $35 \pm 17$  vs  $42 \pm 20$  years,  $p = .04$ ). No complications were registered in the PSA group, while 3 infections were recorded in the control group ( $p = .08$ ). All PSA patients indicated to be satisfied, and admission time was significantly lower compared to controls ( $3.4 \pm 1.2$  vs  $6.3 \pm 1.6$  hours,  $p < .001$ ).

## Conclusions

Performing minor orthopedic surgery using PSA was safe. Patients were satisfied and admission time was almost halved. Finally, as a consequence of using the outpatient operating room, the standard operating room remained available for larger operations.

# Analysis of the ophthalmic day surgery based on medical management indicators in China

Jing Fu, Bowen Zhao, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University

## Aims

To investigate the medical management indexes (costs and waiting time) of day surgery patients and hospitalized surgical patients within one year.

## Methods

A cross-sectional study was conducted to collect the information of all patients who underwent day or hospital surgery in Beijing Tongren Hospital from November 2022 to October 2023. The proportion of day surgery, the costs and the waiting time of day surgery were compared.

## Results

A total of 62,166 patients were included, the total rate of day surgery was 85.00%, the day surgery rate in cataract phaco+IOL surgery was 97.59%, the day surgery rate in strabismus department was 85.67%, in glaucoma department was 76.41%, and fundus department was 70.98%. In terms of hospitalization

costs, the ratio of total day surgery/inpatient costs was 0.39, among which the ratio in cataract phaco+IOL surgery was 0.66, the ratio in strabismus department was 0.76, in glaucoma department was 0.47, and in fundus department was 0.95. In terms of hospital waiting time, the ratio of total day waiting time/hospital waiting time was 0.46, among which the ratio in cataract phaco+IOL surgery was 0.77, in strabismus department was 0.49, the ratio of glaucoma department was 0.42, and the ratio of fundus department was 0.32.

## Conclusions

Day surgery has become the dominant mode for ophthalmic surgery patients in Beijing Tongren Hospital. Day surgery can reduce related medical expenses, greatly shorten the waiting time for patients, improve patients' medical satisfaction, improve medical personnel service efficiency, further save medical expenses for the country, reduce the social medical burden, and improve medical work efficiency.

# Telemedicine Revolution in China: Transforming Gynecological Ambulatory Surgery with Efficiency, Safety, and High Patient Satisfaction

Yuan Ge, Kaiting Chen, Xiufeng Huang, Yue Wang, Gynecology ward 1, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China, Department of Ambulatory Surgery, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China, Gynecology ward 1, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China, Department of Ambulatory Surgery, Women's Hospital, Zhejiang University School of Medicine, Hangzhou, China

## Aims

During the COVID-19 pandemic, telemedicine emerged as a pivotal tool in providing gynecological medical services. This approach offers convenience to patients while saving time and reducing economic costs. This study assesses the impact of telemedicine, focusing on preoperative assessments, scheduling, and postoperative follow-ups in a gynecological ambulatory surgery center.

## Methods

In a retrospective analysis spanning 2019 to 2022, a gynecological ambulatory surgery center in China employed telemedicine, encompassing preoperative remote assessments, remote surgery scheduling, postoperative follow-ups and outpatient consultations. The evaluation centered on the cancellation rate on the surgery day, postoperative outpatient follow-up rate, infection, and readmission rates within 30 days postoperatively, along with patient satisfaction.

## Results

After the implementation of telemedicine, gynecological ambulatory surgeries experienced a substantial increase, growing from 2866 cases in 2019 to 5068 cases in 2022, with a remarkable

76.83% growth. Notably, 92.92% of patients scheduled surgery on the same day

as their visit, with a negligible increase in the same-day surgery cancellation rate (0.45%, 0.25%, 0.08%, 2019, 2021, 2022,  $P=0.03$ ). Postoperative telemedicine achieved a 100% completion rate for follow-up questionnaires and significantly reduced postoperative outpatient follow-up rates (80.41%, 62.77%, 36.17%, 2019, 2021, 2022,  $P=0.000$ ). Importantly, there was no notable rise in infection or readmission rates within 30 days postoperatively (0.28%, 0.22%, 0.30%, 2019, 2021, 2022,  $P=0.781$ ; 0.03%, 0.00%, 0.08%, 2019, 2021, 2022,  $P=0.175$ ). Patient satisfaction consistently remained high (91.72%, 93.28%, 97.13%) and showed a significant upward trend ( $p=0.000$ ).

## Conclusions

The integration of telemedicine significantly enhanced the efficiency, safety, and satisfaction in gynecological ambulatory surgery.

# Exploration of the Safety and Feasibility of Daytime Surgery for Varicose Veins in the Lower Extremities of Elderly Patients

Liao Jianyu, Zhao Jichun, Ma Yukui, Department of Vascular Surgery, West China Hospital, Sichuan University.

## Aims

To investigate the safety and feasibility of daytime surgery for varicose veins in the lower extremities of elderly patients.

## Methods

Clinical data were collected from 176 elderly patients who underwent radiofrequency ablation (RFA) of varicose veins in the lower extremities as daytime surgery at West China Hospital, Sichuan University, from May 2022 to September 2023. All patients were followed up 3 days, 1 month, 3 months, and 6 months postoperatively to assess the success rate of the surgery, operation time, intraoperative blood loss, and usage of anesthetic swelling fluid. Complications, lower extremity skin ulcer healing rate, and great saphenous vein trunk closure rate were also recorded.

## Results

All 176 elderly patients successfully underwent daytime lower extremity vein surgery under ultrasound guidance with local anesthetic swelling. Among them, 6 patients underwent simple

great saphenous vein trunk RFA, and 170 patients underwent great saphenous vein trunk RFA combined with small saphenous vein ablation (endovenous sclerotherapy + dot stripping). The average operation time was  $35.0 \pm 6.0$  minutes, intraoperative blood loss was  $5.0 \pm 2.0$  ml, and anesthetic swelling fluid usage was  $380.0 \pm 35.0$  ml. Complications included: 13 cases of intermuscular vein thrombosis, 30 cases of superficial phlebitis, 4 cases of skin sensory anomalies, 22 cases of pigmentation, and 69 cases of skin bruising. The ulcer healing rate was 100% at 3 months post-surgery. Ultrasound re-examination within six months post-surgery showed a 100% closure rate of the great saphenous vein trunk.

## Conclusions

Daytime varicose vein surgery in elderly is safe, feasible, with minimal complications and high success rates.

# Internet hospitals and the 'decentralized admission and centralized management' model promote the promotion of Ambulatory Surgery

Keke.Yue, Yanqing.Lv, Zhengzhou Central Hospital affiliated to Zhengzhou University

With the ongoing advancements in medical technology and escalating patient demands for expedited recovery and enhanced surgical experiences, the promotion and adoption of day surgery are gaining momentum in China. Despite challenges, our hospital has innovatively integrated our unique characteristics and needs, introducing a "decentralized admission and centralized management" model, complemented by internet hospital technologies. This approach significantly elevates patient surgical experiences and offers invaluable insights for other healthcare institutions.

The advent of internet hospitals provides a novel avenue to bolster the efficiency and quality of day surgeries. Leveraging online consultation platforms, we conduct detailed patient assessments and analyze diagnostic results, facilitating judicious "pre-screening" to ascertain surgical eligibility. This not only streamlines the surgical process but also amplifies safety and

outcomes.

Notably, for institutions lacking dedicated day surgery units, our proposed "decentralized admission and centralized management" strategy proves effective. Under this framework, individual departments admit patients based on their capacities, while a centralized day surgery management center oversees unified coordination. This efficient model optimizes resource utilization and ensures quality and safety in day surgeries.

In conclusion, by amalgamating internet hospital technologies with innovative management strategies, we've successfully propelled the advancement and application of day surgeries. This experience holds substantial reference value, aiming to guide more healthcare institutions in fostering the widespread adoption and development of day surgeries across China.

# A study of precision nursing management under accelerated rehabilitation surgery in gynecologic day surgery

Wang, 本人

## Objective

To explore the application research of precision nursing management under accelerated rehabilitation surgery in gynecological day surgery

200 cases of day surgery patients admitted to the gynecology department of our hospital from February 2023 to December 2023 were selected as the study subjects, and they were divided into the routine group and the research group according to the random allocation method, each with 100 cases. The conventional group implemented ERAS nursing management, and the study group implemented precision nursing management led by specialized nurses under ERAS. Nursing indicators such as preoperative preparation rate, self-rating anxiety scale (SAS) and self-rating depression scale (SDS), and self-care ability scale (ESCA) were compared between the two groups

The rate of perfect preoperative preparation and ESCA score and patient satisfaction in the observation group was significantly higher than that in the control group, and the difference was statistically significant ( $P < 0.05$ ); the SAS score and SDS score, and the incidence of postoperative complications in the observation group were lower than that in the control group, and the difference was statistically significant ( $P < 0.05$ )

The application of precision nursing management under accelerated rehabilitation surgery in gynecological day surgery wards is remarkable, which can improve the rate of perfect preoperative preparation and patient satisfaction of day surgery patients, reduce the incidence of postoperative complications, and ensure nursing safety. Alleviating Patient Anxiety, Improving Self-Care, and Enhancing the Patient Experience

# Gynecological laparoscopic ambulatory surgery: A clinical analysis of 50 cases

Ying Jin, Jie Yu, Tenglan Wu, Mi Su, Xiaoqin Gan, Chengdu Women's and Children's Central Hospital

## Aims

To investigate the feasibility and safety of gynecological laparoscopic ambulatory surgery.

## Methods

A total of 50 patients who received gynecological laparoscopic ambulatory surgery for benign diseases in the ambulatory surgery center of Chengdu Women's and Children's Central Hospital from January 2023 to December 2023 were recruited. All the patients completed preoperative preparation in outpatient department. They admitted at the day of surgery and discharged from hospital at the same day. The duration of operation, loss of blood, surgical outcomes, operational expenses, post operative pains, nausea-vomiting score and patients' satisfaction were observed.

## Results

9 cases were benign ovarian tumor and received oophorocystectomy, 2 cases were uterine myoma and received myomectomy, 10 cases were ectopic pregnancy and received salpingectomy or salpingotomy, 27 cases were infertility and received salpingostomy or lysis

of pelvic adhesions, 1 case was retained products of conception and received hysteroscopy and laparoscopy, 1 case was migrated IUD and received removing of IUD by laparoscopy.

All the procedures were performed successfully. The duration of operation was ( $67.7 \pm 13.2$ ) min, the loss of blood was ( $17.5 \pm 5.4$ ) ml. The pain score of Visual Analog Scale (VAS) postoperation was 2 (1, 3). The nausea-vomiting score was 2 (1, 3). Patients' satisfaction was ( $98.3 \pm 2.5$ ). There were no complications or conversion to open surgery. All were regularly discharged and there was no readmission after discharge. The hospitalization days were decreased significantly, and the medical spending was also reduced significantly.

## Conclusions

It is feasible and safe to perform gynecological laparoscopic surgery for benign diseases in ambulatory surgery center. The social and economic benefits are significant.

# Differences in prevention of seroma after daytime hernia repair by different compression methods

Yang chun, Department of Gastrointestinal Surgery, Sichuan Academy of Medical Sciences and Sichuan People's Hospital, Chengdu 610072, China

## Aims

To investigate the differential effects of a novel hernia wearable device (HWD) and traditional compression methods on postoperative seroma prevention and quality of life after tension-free repair of inguinal hernia.

## Methods

A total of 125 patients with inguinal hernia admitted to the day surgery center of Sichuan Provincial People's Hospital from December 2022 to August 2023 were selected. The patients were randomly divided into two groups using a random number table method. Both groups underwent laparoscopic tension-free repair of inguinal hernia. Follow-up analysis included assessment of postoperative seroma incidence, visual analogue scale (VAS) scores, evaluation of quality of life using Carolina Comfort Scale (CCS), and investigation into satisfaction with HWD usage.

## Results

A total of 122 patients completed one-week follow-up after surgery, resulting in a follow-up rate of 97.6%. The experimental group exhibited an 8.3% (5/60) seroma incidence compared to a 17.7% (11/62) incidence in the control group, demonstrating statistical significance. As time progressed after surgery, VAS scores gradually decreased in both groups; however, at 2 hours postoperatively, the experimental group displayed lower VAS scores than those seen in the control group ( $P < 0.05$ ). The CCS scores of the overall patients were at a low level, and the experimental group was lower than that of the control group ( $P < 0.05$ ).

## Conclusions

Compared with the traditional salt bag compression method, the use of the new hernia wearing device (HWD) after day tension-free inguinal hernia repair can better reduce the incidence of seroma, relieve postoperative pain, improve the quality of life, and the patient satisfaction is higher.

# Practice and application of feedforward control model in the preoperative management of anticoagulants with elderly patients undergoing ambulatory surgery

Yuan Huadi, He Hong, Gao Liyan, Lin Zhazha, Wu Xiaoyan, Hong Pinghua, Nursing Department, The Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, China.

## Aims

To explore the effect of anticoagulant preoperative management based on feedforward control model in elderly patients undergoing ambulatory surgery.

## Methods

Elderly patients who received anticoagulant therapy and had their first day surgery were enrolled by convenience sampling. Among them, 185 patients from September 2022 to March 2023 were selected as the control group with adopting conventional anticoagulants management, 208 patients from April to October 2023 were selected as experimental group with applying a feedforward control model for anticoagulants management on the basis of the control group, including 5 parts: organize nurses' anticoagulant drug knowledge training and assessment, produce diversified drug education, provide multi-channel medication management, add information-based assessment of anticoagulant drugs, standardize the preoperative management process of anticoagulant drugs.

## Results

After the intervention, the cancellation rate of operation caused by anticoagulant drugs in the experimental group (5.77%) was significantly lower than that in the control group (13.51%) ( $P = 0.009$ ) the difference in the patient awareness rate of anticoagulant drugs was statistically significant ( $P < 0.05$ ); before and after the training, there was statistical significance in the nurses' awareness of the types and names of anticoagulants, the time to discontinue anticoagulants, and the names and usage of alternative drugs ( $P < 0.05$ ).

## Conclusions

Anticoagulant drug preoperative management based on feedforward control model can reduce the cancellation rate of day surgery, improve patients' awareness of anticoagulant drugs, and optimize nurses' anticoagulant drug knowledge system.



# Prehospital application of 5A model led by advanced practice nurses in patients undergoing total hip and knee replacement ambulatory surgery

Yuan Huadi, Gao Liyan, Han Nafei, Wu Xiaoyan, He Hong, Zhu Li, Lan Meijuan, Nursing Department, The Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, China.

## Aims

To explore the effect of 5A model led by advanced practice nurses (APN) in prehospital management of patients undergoing total hip and knee replacement ambulatory surgery

## Methods

A total of 296 patients who underwent ambulatory surgery on hip and knee joints replacement in a general hospital of Zhejiang province were into control group and observation group from June to November, 2023 and based on the admission time as a basis for grouping. The control group was the routine management process, and the observation group set up the 5A model (assess, advise, agree, assist, arrange) led by APN on the basis of the control group. The preoperative anxiety, patients' satisfaction, cancellation rate of same-day operation, hospitalization cancellation rate, the defect rate of preoperative examination were compared between the two groups.

## Results

The number of patients with preoperative anxiety in the observation group was lower than that in the control group, and the average score of satisfaction in the observation group was higher than that in the control group ( $P < 0.05$ ). There were no significant differences in cancellation rate of same-day operation, hospitalization cancellation rate, the defect rate of preoperative examination between the two groups ( $P > 0.05$ ).

The 5A model led by APN prehospital management can reduce the preoperative anxiety and improve the satisfaction of patients with total hip and knee replacement surgery, no adverse events occurred and ensure the safety of ambulatory surgery.

# Analysis of enhanced recovery practice in hernia repair under the same-day surgery management model: a single-center retrospective cohort study

SONG YING HAN, Day Surgery Center of West China Hospital, Sichuan University

## Objective

To explore the clinical practice effect of accelerated rehabilitation of hernia repair surgery under the same-day surgery mode and to analyze and evaluate its feasibility and safety. Methods

A retrospective research was used to collect the perioperative and follow-up data of 671 patients who received hernia repair from March 2022 to March 2023 in the Ambulatory Surgery Center of West China Tianfu Hospital, Sichuan University, and analyze the postoperative data of the patients. Unplanned analgesic use rate, postoperative observation time, 24 h pain score after discharge, postoperative complications (including re-admission and re-visit within 1 month after discharge), overnight rate, day-stop rate, transfer rate, satisfaction after discharge, etc., analyze clinical efficacy and summarize experience.

## Results

A total of 671 patients were included in the study, including 573 males and 98 females, 140 under general anesthesia, and 531 under local anesthesia. The average postoperative observation time of all patients was  $3.86 \pm 4.3$  hours, and the daily return rate was 90.16%. All patients had no unplanned analgesia; 11 patients had complications of varying degrees and were treated conservatively; and 1 patient had a patch infection, which recovered after patch removal.

## Conclusion

Hernia repair under local and general anesthesia can be safely performed in a day surgery center and can be included in the same-day surgery mode for management under the condition of rational use of the concept of accelerated recovery and multi-team collaboration.

# Is the Outpatient Cholecystectomy satisfying for the patients?

Emma Sanchez Saez, Alba Diaz Padillo, Enric Sebastian Valverde, Cristina Mercader Bach, Eva Digon Molina, Jordi Comajuncosas Camp, Parc Sanitari Sant Joan de Deu Sant Boi

## Aims

Outpatient Cholecystectomy (OC) started in the 90s decade a few years after laparoscopic cholecystectomy started. The Substitution Index is variable (30-40%) depending on the inclusion and exclusion criteria. OC is a challenge for the surgery team always trying to maintain the essential quality and minimize the related complications, key in the patient satisfaction. To accomplish that, a team work effort is required using minimally invasive surgery and less side effect anesthetic techniques in addition to post-operative nurse care.

## Methods

A retrospective analysis of all patients underwent OC in the first 7 months of the protocol implementation of OC. Demographic data, accomplishment of exclusion and inclusion criteria, patient satisfaction at 24h (and causes of no satisfaction), cause of not suspected hospitalization, re-hospitalization, ambularization index, substitution index

## Results

43% of the Cholecystectomies were OC (60/130). 13 of these patients were non suspected hospitalization due to different causes (4 pain, 1 nauseas, 3 intraoperative complications, 2 anesthetic complications, 2 no discharge criteria, 1 patient willingness). There was 1 re- hospitalization <24h after discharge. The satisfactions index (evaluated at 24h with phone call using the following answer: "Would you repeat the outpatient cholecystectomy in our center?") was 80%. The causes of discontent were pain control and nausea in the residence.

## Conclusions

The Index of Satisfaction is elevated for the Outpatient Cholecystectomy. A constant revision of the data ant the protocols are the key to assure the essential quality and increase the patient satisfaction, so a revision will be due in our protocol in order to improve pain control and nauseas.

# Comparison of efficacy between dexmedetomidine and remimazolam during procedural sedation for endoscopic submucosal dissection of gastric tumor: a prospective randomized controlled trial (preliminary data)

Yea-Ji Lee, Junyoung Park, Department of Anaesthesiology and Pain Medicine, Konkuk University Medical Centre, Seoul, Republic of Korea

## Aims

Successful procedural sedation could be achieved with effective sedation and analgesia. We assessed safety and efficacy of dexmedetomidine and remimazolam as sedatives for procedural sedation.

## Methods

Sixty-four patients aged over twenty scheduled for endoscopic submucosal dissection of gastric neoplasm randomly allocated to either dexmedetomidine group (group

D) or remimazolam group (group R). In group D, patients received dexmedetomidine, loading dose of 1.0mcg/kg for 10 min followed by a continuous intravenous infusion of 0.2-1mcg/kg/hr. In group R, patients received 5mg intravenous bolus of remimazolam followed by a continuous intravenous infusion of 1-2mg/kg/hr. Remifentanyl was administered in both groups as an analgesic. The depth of sedation was monitored with bispectral index (BIS). The procedure started when BIS value maintained

under 80. If involuntary movement or BIS value over 90 was observed during the procedure, a bolus 30mg of propofol was administered as a rescue dose. The occurrence of respiratory depression defined as SpO<sub>2</sub> < 90% was checked during the procedure.

## Results

Of the 61 patients were recruited, 32 and 29 patients were allocated to group D and group R, respectively. Required rescue dose was significantly higher in group D [30 (30) mg vs. 0 (30) mg, P=0.002]. The procedure took significantly longer in group D [55 (35) min vs. 45 (31) min, P=0.034]. The incidence of respiratory depression was comparable between the two groups (21.9% in group D vs. 31.0% in group R, OR=1.607, 95% CI=0.509-5.073, P=0.417).

## Conclusions

Remimazolam was more favorable for stable and effective procedural sedation than dexmedetomidine.

# The effect of remimazolam vs propofol in general anesthesia for therapeutic ERCP on intraoperative hypotension and recovery time: a randomized controlled trial

YanYing Xiao, Rong Zhu, RuPing Dai, Department of Anesthesiology, The Second Xiangya Hospital, Central South University, Changsha, Hunan, China.

## Aims

Endoscopic retrograde cholangiopancreatography (ERCP) is a progressively popular ambulatory surgery for the treatment of biliary pancreatic disease. Patients are susceptible to hemodynamic instability and delayed recovery, primarily due to their weakened condition and hepatic dysfunction. The objective of this trial was to explore the potential benefits of remimazolam on the hemodynamic stability and recovery.

## Methods

Adult patients scheduled for elective therapeutic ERCP were randomized to receive either remimazolam or propofol anesthesia (40 patients in each group). Hemodynamic assessment included the change in mean arterial pressure (MAP) when induction success, the area under the baseline (AUB) of MAP through the procedure, and the incidence of hypotension. Recovery time and any adverse events were documented.

## Results

Remimazolam elicited a milder decrease in MAP after induction than propofol ( $-7.3 \pm 9.1$  mmHg vs.  $-23.5 \pm 13.7$  mmHg), with an adjusted mean difference of 14.5 mmHg (95% CI, 10.6 to 18.5;  $P < .001$ ). The AUB in the remimazolam group was also less than in the propofol group (373 mmHg min vs. 705 mmHg min). The incidence of hypotension was significantly lower for remimazolam than propofol (5% vs. 30%). Patients in the remimazolam group experienced a shorter recovery time compared to those in the propofol group, with median times of 8.0 min and 11.0 min, respectively. There were no serious adverse events in either group.

## Conclusions

In comparison to propofol, remimazolam anesthesia for therapeutic ERCP brought a decreased risk of intraoperative hypotension and a shorter recovery time.

The authors have no conflict of interest to declare.

# A Case of Total Hip Arthroplasty Day Surgery Guided by the Concept of Enhanced Recovery after Surgery

Hao Wang, Day Surgery Center, First Hospital of Lanzhou University, Lanzhou, Gansu Province, China

## Case description

Male patient, 63 years old, was admitted to the hospital for "left hip pain for more than 2 years". The preoperative diagnosis was left hip joint rheumatoid arthritis. The surgical plan is: Artificial left Total Hip Replacement.

## Preoperative and intraoperative

The patient was given education and lung function optimization exercise the day before surgery, and 10% glucose 200ml was taken orally 2h before surgery, and postoperative analgesia was performed with nerve block and multiple approaches. The catheter was not placed during the operation, and the body temperature was maintained in the normal range by using insulation blanket and heated saline water. We used controlled blood pressure lowering technique to reduce the intraoperative bleeding. The operation lasted 100min and the total volume of infusion was 800ml.

## Postoperative

The patient ate food and walked 30min after surgery with the assistance of a walker. The PADS score reached to 9 3 hours after operation and this patient was allowed to leave the hospital. Follow-up was performed 2d, 5d, 15d and 30d after surgery and the patient recovered well with no any adverse effects.

## Summary

The patient's first hip replacement surgery was conducted with common medical model before 1 year, and the second operation was executed with day surgery model. The day surgery cost was 14.7% lower than the first time. The successful implementation of day surgery for daytime total hip replacement shows that day surgery guided by ERAS is more able to add patients to recover after surgery and benefit more patients.

# Bispectral Index Monitoring in Daysurgery - the influence on Propofol, Remifentanyl, Fentanyl and the wake-up time

Viktoria Reumert Laurberg, Nurse Responsible for clinical development

## Aims

Bispectral Index Monitoring (BIS) is a technology which guides the anesthesia personnel to evaluate the depth of sleep during surgery. Thus BIS helps guiding the need for medication during surgery and reduce the risk of over or under dosing. Avoidance of overdosing may lead to faster recovery. The aim of the study was to investigate whether implementing BIS in daysurgery urology patients, had an impact on the use of Propofol, Remifentanyl and the recovery time. During 2020 the anaesthesia staff were trained, and in 2023 BIS was implemented.

## Methods

We conducted a retrospective data study from September 2019 to September 2023. Patient data from four months were analysed regarding the use of Propofol, Remifentanyl, Fentanyl and recovery time after surgery. An average consumption pr. patient and pr. anaesthetic minute were calculated as well, as was minute pr. patient for recovery time.

## Results

From 2019 to 2023 a reduction pr. patient of 6,7 ml (17,6%) of Propofol and 60,7 ml (70,5 %) of Fentanyl and an increase of 16,8 % (63,4%) of Remifentanyl was found.

Pr. anaesthetic minute pr. patient a reduction of 0,10 ml (18,5%) of Propofol and an increase of 0,23ml (60,5%) of Remifentanyl was noticed. The recovery time was reduced by 6 minutes on average from 2020 to 2023.

## Conclusions

Implementing BIS in a daysurgery setting meant faster recovery, use of less Propofol and Fentanyl, and an increased amount of Remifentanyl.

# Reciprocal behavior cognition and experience of nurses in Day Surgery Operating Room: a qualitative study

Lei Yingge ; Zhang Qianchen, Ambulatory surgery center, the First Affiliated Hospital of Anhui Medical University, Hefei 230022, China

## Aims

To explore the real experience of reciprocal behaviour among daytime operating room nurses in the workplace, sort out the opportunities for the construction of cooperative culture in daytime operating room nursing teams, and provide reference for promoting nursing management and team building in daytime operating rooms

## Methods

Phenomenological research methods were used to conduct semi-structured interviews with 10 daytime operating room nurses, and Colaizzi's 7-step analysis method was used to organize and analyze the data

## Results

Four themes were identified :

the characteristics of daytime operating room nursing work determine the universality and enthusiasm of reciprocal behavior; The reciprocal behavior of daytime operating room nurses in the workplace is diverse; The reciprocal behavior of daytime operating room nurses in the workplace is influenced by the context and has timeliness; Nursing managers encourage and support workplace reciprocity behavior.

## Conclusions

Workplace reciprocity has a positive effect on daytime operating room nurses. Nursing managers can leverage the characteristics of reciprocal behavior in the workplace to strengthen teamwork and create a more harmonious working atmosphere.

# Training Practice of Rotational Nurses in Orthopedic Subspecialty of Day Surgery Operating Room Based on Enabling Evaluation

Lei Yingge ; Zhang Qianchen, Ambulatory surgery center, The First Affiliated Hospital of Anhui Medical University, Hefei 230022, China

## Aims

Improving the nursing cooperation ability of rotating nurses in orthopedic subspecialty in the Day Surgery operating room.

## Methods

A standardized training system for orthopedic subspecialties in the Day Surgery operating room was established based on enabling evaluation, including methods for handling external instruments, which was then used for 12 nurses participating in the rotation of orthopedic specialties in the Day Surgery operating room.

## Results

After the training, the comprehensive assessment scores and core competency scores of the 12 nurses were significantly better than those before the training (both  $P < 0.05$ ).

## Conclusions

The construction and application of a Day Surgery operating room orthopedic subspecialty nursing training system based on enabling evaluation have effectively improved the cooperation level of orthopedic subspecialty rotating nurses in surgical nursing and the ability to dispose of external instruments.

# Resumption and development of day surgery during and after the COVID-19 era in China: a Retrospective Observational Study

Tiantian Lei, Peng Liang, West China Hospital of Sichuan University

## Aims

The goal of this study was to report the resumption outcomes of day surgery cases from southwest China and share critical strategies responding to current challenges during and after the COVID-19 pandemic.

## Methods

We conducted a retrospective observational study with 63,074 patients who underwent day surgery. Precautionary strategies and procedures for day surgery cases were reported. We analyzed the total number of day surgeries based on surgery categories, and compared the outcomes including surgery cancellation rate, same-day discharge rate, unplanned re-visit rate, unplanned readmission rate and the frequent complications from 2019 to 2023.

## Results

Since the emergence of the novel coronavirus in December 2019, our center has successfully executed 13,104, 12,663 and 14,122 cases of day surgery in 2021, 2022 and 2023, respectively,

with significant growth rates of 24.6%, 20.4% and 34.3% compared with 2020, respectively. Endoscopic gastrointestinal polypectomy was the most common day surgery, followed by ear, nose and throat (ENT) surgery and laparoscopic cholecystectomy. Complex surgeries of radical mastectomy, thyroid lobectomy, laparoscopic colorectal tumor surgery and video-assisted thoracic surgery (VATS) were on a gradual rise. A total of 24,544 (38.9%) patients experienced same-day discharge. The surgery cancellation rate fluctuated from 0.18% to 2.34%. Unplanned re-visit rate within 30 days fluctuated from 0.86% to 1.67%. Unplanned readmission rate was stable at 0.19%. Delayed post-polypectomy bleeding was the most frequent complication.

## Conclusions

It is proved achievable to resume day surgeries with priority in the wake of the COVID-19, which may contribute to increasing of same-day discharge.

# Scheduled Education of the Healthcare Professional Staff in Ambulatory Surgery

Viktoria Reumert Laurberg, Nurse Responsible for clinical development

## Aims

In 2017 we introduced a planned schedule of education to the professional Staff in our Ambulatory Surgery department. The aim was to secure and maintain the competence in acute situations in the staff and to make room for other information such as research. The Ambulatory Surgery are organized in four sections into different surgical specialities.

## Methods

The two first Wednesdays in every month there are planned education divided into each sections, every third Wednesday the anaesthesia staff and the surgery and the recovery staff has separate education subjects. The last Wednesday all staff are educated together. All sections have a simulation team who performs simulation cases for small portions of the staff at the time. In these cases, the staff practices to act in acute episodes who might happen in the recovery room. For example, AMI, Sepsis, acute bleeding.

One nurse makes the schedule for a year and plans the joint education with an anaesthesiologist. A head nurse and an anaesthesiologist are responsible to book the separated education every third Wednesday and a nurse for each department are responsible to book the divided education. Newly hired are offered education on pain and nausea treatment.

## Results

We have secured that our Wednesdays are filled with qualified and relevant education. All personal are committed and up to date with acute situations.

## Conclusions

Scheduled education gives a possibility to give most of the staff in an Ambulatory Surgery department a basic of knowledge how to recognise and act in acute situations.

# Early surgery in day surgery patients previously infected with SARS CoV-2 does not increase peri-operative complications - a retrospective cohort study

Lu Fang, 13408520861

## Aims

We investigated the incidence of peri-operative complications in day surgery adult patients previously infected with SARS-CoV-2 after early surgery.

## Methods

We conducted a single-center, retrospective case-control study on adult day surgical patients who had previously been infected with SARS-CoV-2 and received airway-controlled anesthesia at our hospital from December 23, 2022, to February 5, 2023. The patients were divided into "early" recovery and "late" recovery groups based on an interval of days from the COVID-19 diagnosis to the surgery date. Demographics and clinical variables were collected from the medical record, including COVID-19 infection, ASA classification, operation duration, anesthesia duration, PACU length of stay, and postoperative complications.

## Results

158 patients were included in this study, including 71 "early" recovery and 87 "late" recovery patients. Comparison between the two groups of patients, median age ( $39.28 \pm 1.486$  vs.  $42.69 \pm 1.289$ ), ASA classification, grade 1 (7.04% vs. 8.05%) and grade 2 (92.96% vs. 90.80%), duration of anesthesia ( $97.27 \pm 7.043$  vs.  $97.60 \pm 5.767$ ), duration of PACU ( $39.87 \pm 1.727$  vs.  $43.29 \pm 1.335$ ), and the incidence of postoperative complications were all 0%.

## Conclusions

Early surgery does not increase the incidence of peri-operative complications in adult day surgery patients recently been infected with SARS-CoV-2.

# Virtual practice, real effect: Innovative application of GasMan® software in oral nitrous oxide anesthesia teaching

ZhaoLiang, Shenzhen Stomatology Hospital (Pingshan) of Southern Medical University

## Objective

This study explored the effect of GasMan® software in oral nitrous oxide anesthesia simulation teaching on students' theoretical knowledge, practical skills, learning efficiency and long-term memory retention.

## Methods

Sixty students from the School of Stomatology of Southern Medical University were randomly divided into an experimental group (using GasMan® software) and a control group (receiving traditional teaching). The study evaluated the students' performance in theoretical knowledge test, simulation operation assessment, learning efficiency and long-term memory retention. Independent samples t-test and chi-square test were used to

analyze the differences between the two groups.

## Results

The results showed that the experimental group performed significantly better than the control group in all aspects, proving the effectiveness and practicability of this innovative teaching method.

## Conclusion

The simulation teaching method using GasMan® software significantly improved the students' mastery of theoretical knowledge, practical skills, learning efficiency and long-term memory retention in oral nitrous oxide anesthesia teaching.

# General Anesthesia for Oral Comfort Treatment in a Child with Severe Dental Fear: A Case Report

ZhaoLiang, Shenzhen Stomatology Hospital (Pingshan) of Southern Medical University

Dental fear is a common psychological disorder that causes excessive fear and anxiety of dental treatment, impairing the oral health and quality of life of patients. Children with severe dental fear are often unable to undergo routine dental treatment and require special methods, such as general anesthesia for oral comfort treatment. This article reports

a case of a 12-year-old child with severe dental fear who received full-mouth treatment under general anesthesia for oral comfort treatment and assessed his psychological changes. The article used the Children's Fear Survey Schedule-Dental Subscale (CFSS-DS) to measure the child's dental anxiety and fear before and after treatment, and described the steps and outcomes of general

anesthesia for oral comfort treatment. The results indicated that general anesthesia for oral comfort treatment effectively lowered the child's dental fear, enhanced his psychological state and treatment cooperation. The article suggests that general anesthesia for oral comfort treatment is a valid method for children with severe dental fear, but it also has some limitations and risks that need strict adherence to operation standards and safety measures, and reinforcement of psychological intervention and oral care before and after surgery.

# Clinical application of nitrous oxide-oxygen inhalation sedation technique in 579 oral outpatient surgeries

ZhaoLiang, Shenzhen Stomatology Hospital (Pingshan) of Southern Medical University

## Objectives

This paper aims to analyze the characteristics and effects of 579 patients who received nitrous oxide-oxygen inhalation sedation technique in the outpatient department of Shenzhen Stomatology Hospital (Pingshan) of Southern Medical University.

## Methods

This paper retrospectively collected the medical records of 579 patients who received nitrous oxide treatment from November 2020 to July 2023, including gender, age, disease type, nitrous oxide concentration, flow rate, treatment cost and duration, and performed statistical analysis.

## Results

The results showed that male patients were slightly more than female patients, adult patients accounted for the majority, periodontal disease and tooth extraction surgery were the main diseases, nitrous oxide concentration and flow rate selection were related to gender, age and disease type, treatment cost and duration were mainly 190 yuan and 1-2 hours, and there were some differences between different age groups and diseases.

## Conclusion

From November 2020 to July 2023, as a tertiary oral specialty hospital in Shenzhen, the outpatient application of nitrous oxide-oxygen inhalation sedation technique to treat various common oral diseases and surgeries was safe and effective, and could improve the medical comfort of different groups of people, which is worth further promotion.



# Tolerability and Cognitive Assess Outcome of Laparoscopic Inguinal Hernia Repair under General Anesthesia among elderly patients

Yiyuan Sun, Yinghan Song, Hongsheng Ma, Xue Luo, Wenzhang Lei, Day Surgery Center of West China Hospital, Day Surgery Center of West China Tianfu Hospital, Sichuan UniversitySichuan University, Chengdu, Department of Gastrointestinal Hernia, West China Hospital, Sichuan University,, Day Surgery Center of West China Hospital, Day Surgery Center of West China Tianfu Hospital, Sichuan UniversitySichuan University, Chengdu, Day Surgery Center of West China Hospital, Day Surgery Center of West China Tianfu Hospital, Sichuan UniversitySichuan University, Chengdu, Department of Gastrointestinal Hernia, West China Hospital, Sichuan University

## Aims

This study aims to investigate the tolerability and cognitive assessment outcomes associated with laparoscopic inguinal hernia repair performed under general anesthesia in elderly patients.

## Methods

This study was a single-center, retrospective chart review of patients who visited Sichuan University West China Tianfu Hospital at China from February 2022 to December 2023. Patients were categorized as non-elderly (18 – 65 yr), or elderly (65 yr or older). Tolerability was assessed based on perioperative complications and postoperative recovery, while cognitive outcomes were measured using Mini-Mental State Examination (MMSE) administered at 6 months postoperatively.

## Results

A total of 100 participants (65 in non-elderly group, 35 in elderly group) undergoing laparoscopic inguinal hernia repair under general anesthesia were included. The laparoscopic inguinal

hernia repair procedure under general anesthesia demonstrated 95% tolerability with a low incidence of perioperative complications. Postoperative recovery was generally satisfactory, with minimal adverse effects observed. Cognitive assessment outcomes revealed no statistically significant difference between non-elderly group ( $26.25 \pm 2.08$ ) and elderly group ( $25.77 \pm 2.30$ ) for the MMSE score.

## Conclusions

Laparoscopic inguinal hernia repair under general anesthesia appears to be well-tolerated among elderly patients, with favorable cognitive assessment outcomes. These findings suggest that this surgical approach can be considered as a viable option for inguinal hernia repair in the elderly population. Further studies with larger randomized controlled trials sample sizes and long-term follow-up are warranted to validate these results and explore potential factors influencing tolerability and cognitive outcomes in this specific patient group.

# Practice on the Quality Standardized Management and Dynamic Monitoring of Ambulatory Surgery: a Way to Promote Medical Quality

Jialin Yang, Xingrong Gong, Linhua Yang, Renji Hospital, affiliated to Shanghai Jiao Tong University School of Medicine

## Aims

China's tertiary comprehensive hospitals have been in full swing for ambulatory surgery. To promote the evaluation and continuous improvement of the quality of ambulatory surgery, so as to ensure the medical quality of over 30000 ambulatory surgeries in a single-center per year.

## Methods

Taking a tertiary comprehensive hospital in China as a pilot, the centralized quality dynamic monitoring mode was adopted to replace specialized decentralized management. An information platform for monitoring and evaluating the quality of ambulatory surgeries was constructed. Quality indicators were centrally monitored through direct data capture from electronic medical records. The medical quality of ambulatory surgery during the period of 2022-2023 were analyzed to optimize the effect of quality monitoring and evaluation.

## Results

By implementing the quality standardized management and dynamic monitoring, the accuracy of quality supervision by the medical management department has been improved. Compared with specialized decentralized management, under this model, the number of ambulatory surgeries in the single-center has increased by 30.2% from 31276 in 2022 to 42290 in 2023. Based on dynamic monitoring data, the incidence of postoperative complications [0.15‰ vs. 0.09‰], temporary cancellation rate of ambulatory surgery [4.2% vs. 3.8%], proportion of patients transferred to specialized wards on the same ambulatory for ambulatory surgery [2.7% vs. 2.2%], proportion of readmission within 7 days [5.1‰ vs. 4.5‰] have been decreasing. Completion rate of follow-up [97.2% vs. 98.4%] have been improved.

## Conclusions

The ambulatory surgery management based on strengthening the standardized management and dynamic monitoring could promote the improvement of medical quality.

# Comparative Analysis of Hospitalization Expenses and Structure of Ambulatory Surgery Diseases between General Hospital and Traditional Chinese Medicine Hospital

Jialin Yang, Xingrong Gong, Yangxi Liu, Ting Shen, Renji Hospital, affiliated to Shanghai Jiao Tong University School of Medicine

## Aims

To analyze the hospitalization expenses and structure of ambulatory surgery diseases between general hospital and traditional Chinese medicine(TCM) hospital, so as to provide a basis for the reform policy formulation of the payment mode of TCM medical insurance.

## Methods

Relevant data such as hospitalization expenses and expenses structure of ambulatory surgery of the case hospitals from 2019 to 2022 were analyzed.

## Results

A total of 95232 ambulatory surgery cases were selected in the case hospitals. The total hospitalization expenses [4379.6 (2293.2, 7563.4) vs. 7629.5 (4467.5, 14154.0) yuan], drug expenses [343.0 (65.0, 1107.0) vs. 749.0 (64.0, 1419.0) yuan], consumables expenses [858.8 (162.2, 1630.1) vs. 1951.0 (620.1, 5720.7) yuan], technical labor expenses [1994.8 (1116.8, 3252.4)

vs. 3943.3 (2510.8, 6123.4) yuan] of ambulatory surgery patients in TCM hospital were lower than those of patients in general hospital ( $P<0.001$ ), and the examination expenses were higher than those of patients in general hospital [432.0 (0.0, 898.5) vs. 40.0 (0.0, 418.0) yuan,  $P<0.001$ ]. In terms of the total hospitalization expenses structure of patients undergoing ambulatory surgery, the proportion of technical labor expenses in TCM hospital was the highest (42.5%), and the proportion of consumables expenses in general hospital was the highest (43.7%).

## Conclusions

In the future, when the TCM medical institutions implement the payment according to the diagnosis-related group, they should fully combine the actual situation of the medical institutions and the characteristics of the disease type. Meanwhile, they need to further establish the medical fine management based on the disease type quality evaluation.

# A step beyond for the outpatient surgery progress: hospital at home care as a support of a new ambulatory hospital circuit

Eneida Bra Insa, Raquel Ríos Blanco, Mónica García Aparicio, Elena Sagarra Cebolla, Pilar García de la Torre, Infanta Cristina University Hospital

## Aims

Development and implementation of a new ambulatory surgery (AS) program with hospital at home care (HaH) support for potentially ambulatory patients who do not strictly meet AS criteria.

## Methods

Due to COVID19 outbreak in 2021, a great constraint in hospital admissions was verified leading to a restriction in the number of programmed surgeries that could be performed with hospitalization. As a result of these limitations, a new general surgery ambulatory program was developed which included patients who did not meet strictly AS criteria in a post-operative HaH circuit. Such initiative resulted in the conversion of patients who would necessarily require hospitalization into ambulatory patients. A revised protocol to future admission to this program was therefore created and implemented in 2021.

## Results

A total of 120 patients (mean age 63.8 yrs.) have been included in the AS plus HaH program since 2021: 53 % have been laparoscopic cholecystectomies, 23 % inguinal and umbilical hernioplasties, 14 % incisional hernia repairs (40 % of them laparoscopic), 5 % laparoscopic appendectomies, 4 % breast oncological surgery and 2 % hemorrhoidectomies. About 48 % were ASA II (anesthetic risk) and 44 % ASA III patients. The average home-stay in the HaH unit was 1.3 days and the total rate of hospital admissions after surgery was 13 %.

## Conclusions

The AS program together with HaH seem to be an efficient initiative, offering the benefit of being more patient-friendly and reducing the use of hospital resources. In addition, the protocol implemented offers an alternative option for selected surgical patients.

# Unmasking a Stealthy Peril: Pneumothorax as an Uncommon Yet Critical Complication of Arthroscopic Shoulder Surgery – A Case Report

Erik Waage Nielsen, Ellisiv Seines, Mariann Harneshaug, Trine Skjeflo, Fredrik Isachsen, Department of Surgery, Nordland Hospital, Bodø, Norway 2 Institute of Clinical Medicine, University of Tromsø, Tromsø, Norway 3 Faculty of Nursing and Health Sciences, Nord University, Bodø, Norway. Department of Pain Medicine and Research, University of Oslo and Oslo University Hospital, Oslo, Norway

We report the case of a 70-year-old, fit, non-smoking male undergoing a two-hour arthroscopic rotator cuff repair in the right lateral decubitus position without nerve blockade. Intravenous anesthesia with remifentanyl and propofol was administered with a size 5 laryngeal mask. Ventilation was pressure-controlled with 9 cm of water and 40% oxygen without positive end-expiratory pressure.

Toward the end of the procedure his oxygen saturation dropped from 95-98% to 89%, and the mean arterial pressure decreased from 70 to 60 mmHg. These changes prompted an increase in the oxygen concentration and inspiratory pressure, slightly improving oxygenation but not blood pressure.

After surgery, despite 100% oxygen, the patient was short of breath, pale, and had low blood pressure. An ultrasound by the on-call anesthesiologist showed no lung sliding, and a chest x-ray

confirmed a left-sided tension pneumothorax. Placement of a chest drain in the left fifth intercostal space led to lung re-expansion within two hours.

The air likely entered the pleural space via pathways created by the arthroscopic surgery itself, rather than through a bulla rupture. The arthroscopy involved the creation of portals, which, along with the alternating suction and infusion pressures, could introduce air into the shoulder joint. Air and water may follow fascial planes and channels into the pleural cavity, in line with embryological and radiological evidence.

This case highlights that shoulder arthroscopy, while generally safe, can occasionally lead to pneumothorax. It underscores the importance of perioperative ultrasound for the rapid detection and management of such life-threatening complications.

# Efficacy of local anesthesia combined with ultrasound-guided ilioinguinal nerve block in day surgery for elderly patients with inguinal hernia

Hong Liu, Linxiang He, Wei Zhang, Xiaoping Ye, Xuehu Wang, Yu Zhao, Department of Day Surgery Center, the First Affiliated Hospital of Chongqing Medical University, Department of Day Surgery Center, the First Affiliated Hospital of Chongqing Medical University, Department of Day Surgery Center, the First Affiliated Hospital of Chongqing Medical University, Department of Ultrasound, the First Affiliated Hospital of Chongqing Medical University, Department of Vascular Surgery, the First Affiliated Hospital of Chongqing Medical University, Department of Day Surgery Center, the First Affiliated Hospital of Chongqing Medical University

## Aims

Ultrasound-guided ilioinguinal nerve block has been proven to be a safe and effective measure to control pain after abdominal surgery. The purpose of this study is to clarify the efficacy and safety of local anesthesia combined with ilioinguinal nerve block in day surgery for elderly patients with inguinal hernia.

## Methods

A prospective control study was conducted in 86 male patients (75 years of age, ASA grade 3) who underwent Lichtenstein hernia repair. Patients were randomly assigned 1:1 to receive local anesthesia combined with ilioinguinal nerve block (case group) or local anesthesia alone (control group). The primary endpoints were to compare intraoperative and postoperative pain (VAS score) and comfort score (Kolcaba Comfort Scale) between the two groups. The secondary endpoints were comparing operation time, intraoperative blood loss, postoperative pain score, oral analgesic dose, wound events, and adverse drug reactions to local anesthesia.

## Results

The intraoperative and 3-hour postoperative pain scores were lower and the comfort score was higher in the case group ( $P < 0.05$ ). The postoperative pain and the dose of painkiller in the case group were lower than those in the control group ( $P < 0.01$ ). There were no significant differences in operation time, intraoperative blood loss or wound events between the two groups ( $P > 0.05$ ). In the case group, 3 patients had transient anesthesia adverse reactions (lower limb sensory and motor disorders and anesthetic drug reactions). No adverse reactions occurred in the control group.

## Conclusions

Local anesthesia combined with ilioinguinal nerve block is effective and safe for day surgery in elderly patients with inguinal hernia.

# New procedures in ambulatory ENT surgery – our 5 years of experience

Iva Botica, Matea Veršić, Nikolina Bilonić, Marija Pastorčić Grgić, Renata Curić Radivojević, University Hospital Centre Zagreb Croatia, General Hospital Zadar Croatia

## Aim

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 this article, we would like to present our five years of experience.

## Method

In collaboration with our anesthesiologists, we've developed a protocol to determine which patients can be operated as outpatients. After the outbreak of COVID-19, only patients with a negative PCR test could be operated on. We only had operating room available one day a week for operations under general anaesthesia. During the COVID-19 pandemic, the operating room were closed for all elective procedures for more than six months.

## Results

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. In terms of cost-effectiveness, outpatient surgery is 16% more effective than inpatient surgery.

## Conclusion

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.

# Feasibility of ambulatory thyroidectomy: experience about 42 cases

Zatir Soufiane, military hospital of Oran, Algeria

## Aims

we started doing thyroidectomies, we operated on 42 patients with multinodular goiter without suspicion of malignancy.

## Methods

we operated on 42 patients with multinodular goitre without signs of malignancy, the selection criteria was: patient age less than 70 years old simple nodular goiter without comorbidity factors, namely hypertension, diabetes, morbid obesity.

## Result

No case of postoperative hematoma was noted, the drain was kept on for 8 hours. two cases of complication of a type of hypocalcaemia complicated by ants benefiting from a calcium-based treatment. There is no recurrent nerve injury.

## Conclusions

Total thyroidectomy in carefully selected cases is safe as an outpatient procedure in the community setting, and strict adherence to guidelines and procedures results in low complication rates.

# Treatment of inguinal hernias by laparoscopy on an ambulatory, about 400 cases

Zatir Soufiane, military hospital of Oran, Algeria

## Aims

The treatment of inguinal hernias by laparoscopy or robotic surgery has become a necessity in the management of inguinal hernias. Given the advantages of minimally invasive surgery more than ambulatory surgery has become a necessity.

## Methods

We operated an ambulatory 400 patients for laparoscopic inguinal hernia by total extra peritoneal from 2020 to 2023. One of the advantages of total extra peritoneal repair by laparoscopy.

## Results

Practically all our patients were discharged the same day without any problems detected, apart from 5 patients who had postoperative problems due to anesthesia and diabetic imbalance.

## Conclusions

The treatment of inguinal hernias an ambulatory basis by laparoscopy is the gold standard of treatment given the best advantages of this procedure.

# Development of a questionnaire for systematic monitoring of postoperative recovery after ambulatory urogynecologic surgery

Linda Bech Ørving, Department of Anaesthesiology, Ambulatory Surgery, Copenhagen University Hospital Herlev – Gentofte

## Aims

To develop and validate a questionnaire for systematic monitoring of postoperative recovery after outpatient urogynecologic surgery.

Background In Denmark, the number and complexity of outpatient surgical procedures is steadily increasing, including urogynecologic procedures. Our insight into patient-experienced symptoms in the immediate postoperative recovery period after outpatient urogynecologic surgery is limited.

## Methods

A multi-methods study with IV inter-related studies: I. A qualitative study with individual interviews of 30 patients exploring post-discharge symptoms postoperative day (POD) one after urogynecologic ambulatory surgery (published). II. A scoping review mapping existing instruments for monitoring “postoperative recovery” after ambulatory surgery (ongoing). III. Based on studies I and II, we developed a postoperative recovery questionnaire and conducted cognitive interviewing to determine face and content validity. IV. A pilot study testing electronic

distribution of the questionnaire at POD one and seven.

## Results

Preliminary results from the pilot study including 50 patients showed a 98% response rate at POD one and 90% at POD seven. Postoperative pain, 57% reported pain scores  $\leq 5$  on the Numerical Rating Scale (NRS) at POD one and 93,3%, NRS  $\leq 5$  at POD seven. 98% reported having taken pain medicine at POD one and 55,6% at POD seven. 12,2% reported not feeling sufficiently prepared to manage pain at POD one and 8,1% at POD seven.

## Conclusions

Distribution of the validated questionnaire is feasible. The results suggest that preoperative information and postoperative pain management strategies may be optimized. We plan to conduct a larger survey at three university hospitals in Denmark.

# A new technique for the day surgery of great saphenous varicose veins: UGFS in association with percutaneous GSV high ligation

Hong Liu, Yu Zhao, Department of Day Surgery Center, the First Affiliated Hospital of Chongqing Medical University.

## Aims

To evaluate the efficacy of UGFS in association with percutaneous GSV high ligation in the day surgery of great saphenous varicose veins.

## Methods

A total of 78 cases (82 limbs) with primary great saphenous varicose veins due to GSV incompetence who were treated by UGFS in association with percutaneous GSV high ligation were retrospectively reviewed. The operation time, blood loss and cost were collected. At one year post operation, the closure rate of GSV, VCSS, CIVIQ and complications were recorded.

## Results

The operation time was  $20.3 \pm 2.35$  min, the amount of bleeding was  $3.42 \pm 0.81$  ml, and the cost was  $\text{¥}4368.00 \pm 526.45$ . The

primary GSV closure rate was 87.8% (72/82), and the second GSV closure rate was 95.1% (78/82) one year post operation. VCSS declined from  $3.28 \pm 1.12$  to  $0.9 \pm 0.78$  ( $p < 0.01$ ) and CIVIQ improved from  $81.79 \pm 7.49$  to  $96.47 \pm 3.86$  ( $p < 0.05$ ). The effective rate was 100%. There were 16 limbs of thrombophlebitis, 27 limbs of hyperpigmentation, 5 limbs of saphenous junction pain, 3 limbs of asymptomatic intermuscular venous thrombosis, and no other severe complications.

## Conclusions

UGFS in association with percutaneous GSV high ligation is effective and safe for the day surgery of great saphenous varicose veins.

# Postoperative Dexmedetomidine Infusion and Chronic Postsurgical Pain in Thoracoscopic Pulmonary Nodule Surgery: A Retrospective Study with Propensity Score-Matched Analysis

Hang Sun, Yiwei Zhong, Min Wang, Shujie Niu, Rusong Yang, Yali Tian, Zhengliang Ma, Bingbing Li, Department of Anesthesiology, Nanjing Drum Tower Hospital, Affiliated Hospital of Medical School, Nanjing University, Nanjing, China, Department of Thoracic surgery, Nanjing Drum Tower Hospital, Affiliated Hospital of Medical School, Nanjing University, Nanjing, China

## Aims

Patients frequently suffer from debilitating chronic post-surgical pain (CPSP) subsequent to thoracoscopic surgery. The impact of postoperative dexmedetomidine infusion on CPSP remains elusive. This study aimed to scrutinize the effect of dexmedetomidine on both 1-year incidence of CPSP and the quality of recovery after thoracoscopic pulmonary nodule surgery.

## Methods

This retrospective analysis encompassed clinical and follow-up data from 1148 patients undergoing thoracoscopic pulmonary nodule surgery at Nanjing Drum Tower Hospital between September 2021 and August 2022. Patients were stratified into the dexmedetomidine group and the routine group, with propensity score matching applied to harmonize baseline characteristics. Comparative analysis sought to delineate distinctions of CPSP and recovery quality 1-year after surgery.

## Results

Following propensity score matching, a cohort of 276 patients in each group underwent analysis. Intragroup comparisons revealed

no statistically significant disparities in 1-year CPSP incidence (85/276 (30.8%) vs. 93/276 (33.7%),  $P=0.466$ ), moderate-to-severe pain occurrence (19/85(22.4%) vs. 24/93(25.8%),  $P=0.591$ ), neuropathic pain (14/85(16.5%) vs. 14/93(15.1%),  $P=0.795$ ), and postoperative recovery quality assessed by SF-12 score (113.1[107.1,116.0] vs. 112.3[107.4,116.0],  $P=0.787$ ). Multivariate logistic regression analysis encompassing the entire cohort identified female (OR=2.10, 95% CI: (1.59, 2.79),  $P<0.001$ ) and postoperative rescue analgesia (OR=1.47, 95% CI: (1.09, 1.96),  $P=0.010$ ) as risk factors for CPSP, while intraoperative fentanyl dosage (OR=0.92, 95% CI: (0.87, 0.98),  $P=0.006$ ) emerged as a protective factor.

## Conclusions

The prolonging administration of Dexmedetomidine did not yield discernible amelioration in either 1-year CPSP or the recovery quality post thoracoscopic surgery. Noteworthy risk factors for CPSP encompassed female gender, postoperative rescue analgesia, and diminished fentanyl dosage intraoperatively.

# Walking spinal in day case surgery – a quality improvement project

Peter Nørgaard, Patricia Duch, Anesthesiologic department, Nordsjællands hospitaler, Hillerød, Denmark.

## Aims

The aim of day case surgery is to ambulate patients as fast as possible, enabling them to return home with minimal pain and complications. In 2019, we introduced a very low-dose spinal block in our department—a 'walking spinal' that anesthetizes only the sacral roots; for perianal surgery facilitating patient mobility and early discharge post-surgery. This study evaluates the applicability of this approach as an anesthesia method for day case surgery.

## Methods

Prospective Danish single-center cohort study of patients having transanal hemorrhoidal dearterialization (THD). A walking spinal was administered to non-fasting ASA I-II patients, monitored with ECG, BP, and SAT in lateral supine position. Hyperbaric bupivacaine 5 mg/ml; 0.3 ml., mixed with 0.2 ml isotonic NaCl or 80 µg epidural-morphine (0.2 ml) was given intrathecally (L3/L4). The patient was placed in a sitting position for 10 minutes

immediately after the procedure. All patients received a follow-up call the day after surgery. Outcomes focus on same-day discharge, motor function of lower extremities, need for general anesthesia, and overall patient satisfaction.

## Results

From 2019-2023; 150 THD patients were included. All were discharged the same day and had preserved motor function. Two patients had general anesthesia due to insufficient spinal-anesthesia, none had hemodynamic complications and 92% preferred same anesthesia for future surgeries.

## Conclusions

Walking Spinal anesthesia with very low dose of bupivacaine demonstrates feasibility for THD in day case surgery, with our cohort experiencing high satisfaction, absence of hypotension, and preservation of motor function.

# Quality control analysis of daytime hysteroscopic surgery --A series of 20382 daytime hysteroscopy cases from the Largest Women's Hospital in China

Limei Chen, Hysteroscopy Centre, Obstetrics and Gynecology Hospital of Fudan University

## Aims

Analyzing the quality control of daytime hysteroscopic surgery in our center, in order to improve the clinical practice and management of daytime hysteroscopic surgery.

## Methods

The quality control data of patients who underwent daytime hysteroscopic surgery in the Obstetrics and Gynecology Hospital Affiliated to Fudan University from January 2017 to December 2021 were retrospectively analyzed through the electronic information system of our hospital and the monthly quality control report of our hysteroscopy center.

## Results

There were 2866, 3119, 3563, 4383 and 6451 patients in 2017, 2018, 2019, 2020 and 2021 respectively, with an average age of  $37.6 \pm 12.2$  (15 ~ 72) years. The cancellation rate on the day of operation accounted for 1.8% (375 / 20757) of all patients with

appointments. From January 2017 to December 2021, there were 407 cases, 382 cases, 444 cases, 562 cases and 1093 cases of grade IV hysteroscopy in daytime hysteroscopy. The incidence of daytime hysteroscopic complications was 0.16% (33/20382), including 20 cases of uterine perforation, 5 cases of hysteroscopic failure, 3 cases of excessive intraoperative bleeding, 2 cases of suspicious fluid overload, 2 cases of intestinal injury and 1 case of anesthesia accident. The overnight admission rate was 0.16% (32/20382), and the unanticipated secondary operation rate was 0.03% (6/20382). From January 2019 to December 2021, the satisfaction score of daytime hysteroscopy increased year by year.

## Conclusion

Daytime hysteroscopic surgery is reliable and safe. It improves patient satisfaction and medical service efficiency and can be popularized.



# A Pilot Anaesthesia Sustainability project – Injectomat versus Infusomat procedure in Day Surgery

Viktoria Reumert Laurberg, Nurse Responsible for clinical development

## Aims

We conducted a small pilot study focusing on two anaesthetic procedures. The aim of the project was to investigate how much Co2 each procedure emits, how much each procedure costs, and to find out how the procedures workflow effect the nurse physically, especially with regarding to hands and fingers. I the standard procedure- Injectomat- 60 ml syringes are used, which the nurses pull up by hand. In the procedure – Infusomat- the medication hangs in a drop. Life Cycle Assessments (LCA) has been conducted including all utensils used for both procedures.

## Methods

In two test periods of 8 weeks for each procedure a nurse anaesthetist filled out a utensils schedule and a Quick DASH questionnaire. The Quick DASH and the number of utensils were counted and thereby the prices, Co2 and the DASH score was calculated. We conducted a qualitative study through semi-

structured interviews to explore relevant aspects of the two different procedures

## Results

During the weeks of registration 14 surgeries were performed using Injectomat and 20 surgeries using Infusomat. The use of utensils was 56,3% lower per patient using Infusomat than Injectomat, which also gave an 11,3 % cost saving. In Co2 there was a 57,45 % reduction when using Infusomat.

The DASH score went from 23,33 and 13,33 using Injectomat to 6,67 and 8,33 using the Infusomat.

## Conclusions

This pilot study indicates that, using Infusomat instead of Injectomat is more gentle to hands and fingers, it is more cost effective and the Co2 footprint is halved.

# Satisfaction with perioperative care in patients subjected to regional (local) anesthesia or analgo-sedation in All-on-four procedures

*Dražena Gerbl, Igor Smojver, Marko Vuletić, Valentina Brzović Rajić, Luka Markovic, Dragana Gabrić, University Hospital Centre Zagreb, St.Catherine Specialty Hospital, Department of Oral Surgery University Hospital Centre Zagreb, Department of Endodontics and Restorative Dentistry University Hospital Centre Zagreb, Private Practice Pula, Department of Oral Surgery University Hospital Centre Zagreb*

## Aims

To establish the attitude of the respondents towards local anaesthesia (LA) and analgo-sedation (AS), satisfaction after undergoing LA or AS, difference in satisfaction level after LA in contrast to AS and to determine the factors which affect the assessment of the overall anaesthetic management.

## Methods

The participants are patients treated at the St. Catherine Specalty Hospital in the period from 1 January to 1 December 2023. The inclusion criterion for participation in the study is a scheduled dental implant procedure in the upper and lower jaw which can be performed under LS or AS.

Emergency patients were not included, neither were parturients and persons with cognitive impairments. Relevant data was acquired by means of an anonymous questionnaire.

## Results

Out of 30 questionnaires, 30 have been completed. The majority (62.5%) of the

respondents was in favour of AS. The respondents rated anaesthetic management satisfaction with assessment marks 4 (24.2%) and 5 (69.2%). After having experienced anaesthesia, 61.7% of the respondents would opt for AS again.

## Conclusions

More than 60% of the participants supports AS. Experience and surroundings affect their attitude towards AS and LA. The patients who had prior experience with LA would opt for LA again. More than 90% of the participants expressed a high level of satisfaction regarding anaesthetic management. Access to information about anaesthesia, possibility to participate in the selection of anaesthesia type, psychological support and the occurrence of unwanted events associated with the use of anaesthesia affected the total assessment mark of the overall anaesthetic management.

# Feasibility and Safety Analysis of Autologous Arteriovenous Endovascular Fistulae Surgery under Day Surgery Mode

Hang Chen, Department of Day Ward, The First Affiliated Hospital, Jiangxi Medical College, Nanchang University

## Aims

Autologous arteriovenous endovascular fistula surgery is an important surgical procedure to establish vascular access for maintenance dialysis patients. Routine inpatient surgery implies a cumbersome admission process and bed waiting, and patients tend to have ASA scores of III-IV. The aim of this study was to analyze the feasibility and safety of performing autologous arteriovenous endovascular fistula surgery in day surgery setting.

## Methods

The clinical data of 120 patients who underwent autologous arteriovenous endovascular fistula surgery at the First Affiliated Hospital of Nanchang University from April 2020 to November 2022 were analyzed in a controlled manner, and were equally divided into 60 cases in the routine inpatient surgery group and 60 cases in the day surgery group using the double-blind method. The patients' general information, disease parameters, and surgical information were statistically analyzed.

## Results

There were no significant differences in the general information, disease parameters, operative time, fistula blood flow, complications, and surgical success rate between the two groups ( $P > 0.05$ ). The day surgery group had shorter waiting time for surgery ( $P < 0.01$ ) and hospitalization time ( $P < 0.01$ ) and lower hospitalization cost ( $P < 0.01$ ).

## Conclusions

Through detailed preoperative education and process-oriented day surgery management mode, it can ensure the safety of autologous arteriovenous endovascular fistula surgery under day surgery mode. It allows renal failure patients to shorten the surgery appointment time and improve the efficiency of admission and discharge, so that more patients can enjoy high-quality and high-efficiency medical services.

# The effect of a four-step recovery on hospital stay and satisfaction in patients with inguinal hernia repair under general anesthesia

Guozhen Ma, Yijun Luo, Day Surgery Care Unit, Huazhong University of Science and Technology Union Shenzhen Hospital, Shenzhen, China (Nanshan People's Hospital)

## Aims

To explore the impact of a four-step recovery on hospital stay and patient satisfaction in ambulatory surgery individuals undergoing inguinal hernia repair.

## Methods

A total of 84 patients were included, 44 in the intervention group and 40 in the control group. The core of the intervention is to eat, move, have no discomfort, and then ambulate after post-operation. Results were compared for the first time to ambulation, the first time to dietary, hospital stay, and patient satisfaction.

## Results

The time to first ambulation was ( $3.10 \pm 0.46$ ) hours in the intervention group and ( $3.79 \pm 0.69$ ) hours in the control group, with a statistically significant difference ( $P < 0.001$ ). Likewise, the intervention group demonstrated a significantly shorter time to

first dietary ( $2.52 \pm 0.58$ ) hours when compared to the control group ( $3.55 \pm 0.71$ ) hours ( $P < 0.001$ ). The four-step recovery by nurses resulted in the earlier achievement of a PADSS score 9, reducing hospital stay in the intervention group. Hospital stay was significantly lower in the intervention group ( $12.46 \pm 2.52$ ) hours compared to the control group. Furthermore, the intervention group ( $96.82 \pm 2.98$ ) reported a statistically significant increase in patient satisfaction compared to the conventional group ( $95.18 \pm 2.39$ ), despite both groups already having high levels of satisfaction.

## Conclusions

Implementing a four-step recovery for inguinal hernia repair can reduce the fasting times, ambulate early, and meet the PADSS criteria earlier, then shorten hospital stay as well as enhance patient satisfaction.

# Analyses and Reflections on the Status Quo of Day Surgery Developments in China

Hui SUN, National Institute of Hospital Administration

## Aims

To analyse the status quo of day surgery implementation in China based on data from a nationwide information system and discuss the key factors to facilitate its normative implementation.

## Methods

Descriptive analysis was applied to data collected by National Clinical Improvement System (NCIS) from 2019 to 2022.

## Results

The majority of day surgery occurred in tertiary medical institutions. In 2022, the number of day surgery operation mode had risen 7.85 times compared to 2019. The years from 2019 to 2022 experienced an annual growth rate of 8.51% in the number of day surgery institutions, 26.48% in the quantity of day

surgery and 3.00% in the proportion of day surgery to elective surgery reaching 12.25% in 2022. During the same period, the postoperative complication rate, cancellation rate and unplanned reoperation rates of day surgery dropped year by year, with an average annual decrease of 24%, 1.7% and 8.5% respectively.

## Conclusions

Day surgery in China is rushing into a rapid development stage. The key of promoting normative development of day surgery in China lies in the establishment of two systems, systematic management system and evaluation system. Additionally, supportive medical insurance policy and rewarding hospital performance appraisal system also play a crucial role.

# Observation on the application effect of methylene blue analgesia in daytime hemorrhoid surgery

Xujing, Gongzhixian, The First Affiliated Hospital Of Nanchang University.

## Aims

To observe the analgesic effect of DS in patients with hemorrhoids.

## Methods

A total of 80 patients who underwent external stripping and internal ligation during the day in our hospital from November to December 2021 were selected, excluding the history of underlying diseases. 40 patients in experimental group (group A) were treated with bimethylene blue analgesia, and 40 patients in control group (group B) were treated with conventional wound dressing after surgery.

## Results

The VAS score and the probability of using additional analgesics in group A were lower than those in group B, the first time to get out of bed, the first time to eat and the hours of hospitalization in group A were shorter than those in group B, and the discharge satisfaction in group A was higher than that in group B.

## Conclusions

Methylene blue analgesia for hemorrhoids DS has ideal analgesic effect and is safe and reliable. Therefore, methylene blue can be promoted and applied as a recommended drug in postoperative analgesia for hemorrhoids.

# The Practice and thinking of ophthalmic day surgery in China

Jia Qu, Yanyan Chen, The Eye Hospital of Wenzhou Medical University, China

## Aims

In order to respond to the "Action Plan for Further Improvement of Medical Services" proposed by the National Health and to further improve the quality and efficiency of services and improve patients' medical experience in ophthalmic day surgery.

## Methods

Through the design of independent unit of ophthalmic daily operation, improvement of medical nursing service process, admission and evaluation of ophthalmic daily operation, clinical path management of ophthalmic daily operation, anesthesia management of ophthalmic daily operation, follow-up management of patients after discharge, etc. Internet + information technology was used to establish preoperative, intraoperative and postoperative whole-chain day surgery

management information system and medical process.

## Results

Randomized investigation of 25762 patients, patient satisfaction significantly increased (99.8%), the average length of hospital stay significantly decreased (up to 2 hours), the rate of missed day surgery decreased (patient hospitalization costs significantly decreased (-15%).

## Conclusions

The establishment of a whole-chain day surgery information management system and hospital procedures covering pre-operation, intra-operation and post-operation is conducive to the rapid recovery of patients and the improvement of patients' medical experience.

# Development and application of discharge readiness scale for cataract day surgery

Yanyan Chen, Chen Chen, The Eye Hospital of Wenzhou Medical University, China

## Aims

To provide a scientific evaluation tool for cataract patients' discharge readiness scale.

## Methods

1. On the basis of literature review, combined with the results of qualitative interviews, the scale item pool is formed. Sixteen experts were invited to consult Delphi experts to form the initial version of scale.
2. Nurses evaluated 142 cataract patients with discharge readiness scale. Descriptive statistics were used to describe the discharge readiness level. Multivariate linear regression analysis was used to analyze the influencing factors of discharge readiness. Spearman test was used to understand the correlation between discharge readiness and healthy outcome after discharge.

## Results

1. Through the literature review, the item pool of 32 items was drawn up, After two rounds of expert consultation, a 24-item initial scale was formed.

2. After the item analysis and the reliability and validity test, the formal scale was formed. The formal scale consisted of 21 items in 5 dimensions including Cognition of Discharge Readiness, Personal Status, Knowledge of Health Education, Coping Ability, and Social Support. Five common factors were extracted from EFA, which could explain 70.12% of the total variance. The results of CFA showed that  $\chi^2/df$  was 1.873, RMSEA was 0.066, CFI was 0.946, and TLI was 0.934. The Cronbach's  $\alpha$  of the total scale was 0.903, the Cronbach's coefficients of the five dimensions range from 0.698 to 0.929, and the S-CVI/Ave was 0.99, indicating that the scale has good reliability and validity.

## Conclusions

The discharge readiness scale for patients undergoing day cataract surgery has good reliability and validity and can be used to evaluate discharge readiness for patients.

# Role of Prophylactic Tranexamic Acid on Laparoscopic Cholecystectomy: A Prospective Study on Patients who underwent Laparoscopic Cholecystectomy in a Tertiary Public Hospital in the Philippines

*Kristine Joy Flores, MD, Philippine College of Surgeons - Resident Trainee*

## Aims

The researchers would like to evaluate the role prophylactic Tranexamic Acid in patients who underwent Laparoscopic Cholecystectomy. Control of bleeding would not only lessen morbidity in the surgical field but will lessen operative time, post-operative hospital stay, and risk of peri-operative blood transfusion.

## Methods

Subjects were those operated within 14 months time frame and was cohort into experimental group and control group. Data collected were pre-operative and post-operative hemoglobin & hematocrit as well as intra operative blood loss. Statistical significance was computed using measure of central tendency.

## Results

TXA was given in 25 patients who underwent laparoscopic cholecystectomy via 1gTIV prior cutting and was not given in

50 patients who underwent the same procedure. The results showed there is a significant decrease in the post-operative mean hemoglobin and hematocrit from patients who didn't receive TXA bolus ( $P < 0.05$ ), even in the absence of significant blood loss intraoperatively. On the other hand, the TXA group data showed no significant drop from pre-operative and post-operative hemoglobin and hematocrit. In fact, even in the presence of significant blood loss, giving of bolus TXA prior to OR helped in reducing the need for peri-operative blood transfusion.

## Conclusions

Giving of pre-operative tranexamic acid bolus was proven to reduce post-operative hemoglobin and hematocrit decline and lessen the intraoperative blood loss during laparoscopic cholecystectomy procedures. Prophylactic TXA is a safe and cost-effective way of preventing perioperative blood product transfusion. It does not alter the patients' coagulation factors and is proven to be non-toxic and has no recorded adverse drug effect.

# Ambulatory discharge of patients undergoing acute laparoscopic cholecystectomy - Can it be done?

*Lotte Gade, Tina Tang Fredenslund, Annemette Lindberg Strømgaard, Anne Højager Nielsen, Department of Anaesthesiology and Intensive Care, Gødstrup Hospital*

## Aims

To describe trajectories of patients undergoing acute laparoscopic cholecystectomy and to identify potential for discharge from post-anesthetic care unit (PACU).

## Methods

Retrospective chart review of all patients > 12 years undergoing acute laparoscopic cholecystectomy from October 1st 2022 to September 31st 2023. For this patient group, our hospital introduced PACU discharge to the care by relatives for patients preoperatively admitted to hospital, thus making it possible to convert a hospital stay to ambulatory surgery. Exclusion criteria: Endoscopic retrograde cholangio pancreatography (ERCP), and laparoscopic procedures converted to open surgery. From the charts, we extracted the following data: Sex, BMI, smoking status, age, admission pathway, hospital length of stay, readmission within 72 hours, preoperative B-leucocytes and C-reactive protein, American Society of Anesthesiologists Physical Status Classification Score, and use of antithrombotic agents prior to hospitalization.

## Results

We reviewed 189 patients and excluded 6 patients who underwent ERCP or open surgery. Patients ( $n=22$ , 12%) discharged from PACU were younger, less infected and had shorter procedures, 19% were discharged within 12 hours from the surgical ward and 69% stayed > 12 hours including two patients who went to the intensive care unit. Of those discharged within 12 hours from the ward almost none had any interventions (IV or blood sampling) indicating a potential for increased PACU discharge. Three PACU discharged patients were readmitted within 72 hours compared to eight from the ward discharge group.

## Conclusions

Ambulatory PACU discharge of patients undergoing acute laparoscopic cholecystectomy is possible and may be increased. Readmission rates were low but need further consideration.

# Exploration of optimizing the management of daytime cataract surgery

Jinfeng Su, Zhigang Yuan, Chaoran Lv, Aier Ophthalmology Hospital of Shanxi

## Aims

Due to the short hospital stay of patients undergoing daytime cataract surgery, there are issues such as insufficient communication between doctors and patients, and incomplete understanding of the patient's condition by the surgeon during the diagnosis and treatment process. This article aims to identify the shortcomings in the management process of daytime cataract surgery and explore effective solutions to better ensure medical quality and improve patient satisfaction.

## Methods

Starting from March 2023, a consistent approach will be implemented between outpatient and surgical doctors. Prior to admission, the surgeon will conduct a thorough medical history inquiry and preoperative examination of the patient, interpret the examination report, and develop a reasonable surgical approach. And special notes should be made on the outpatient medical records and hospitalization certificates to remind the attending physician. On the day of surgery, the surgeon should

re-examine and communicate with the patient. For special patients, the surgeon should emphasize key points in a targeted manner. Comparing the incidence of medical errors and patient satisfaction before and after improvement.

## Results

After improvement, patient satisfaction significantly improved, and there were no medical errors caused by short diagnosis and treatment time.

## Conclusions

The consistent approach between outpatient and surgical doctors can enable surgeons to fully understand patients, facilitate doctor-patient communication, and increase patients' awareness and cooperation in surgery. At the same time, medical errors in the management process of daytime cataract surgery are minimized as much as possible, and the safety and patient satisfaction of daytime cataract surgery are improved.

# Implementation of a published outpatient THA protocol without prior outpatient THA experience – results from the initial five months

Christoffer C. Jørgensen, Christian S. Hansen, Christian Rothe, Thor-Magnus Sveen, Mikkel S. Sundstrup, Kai HW. Lange, Department of Anesthesia, Hospital of Northern Zealand, Hillerød, Denmark

## Aims

To explore the feasibility and success rate when implementing a previously published protocol for outpatient total hip arthroplasty (THA) in a hospital with no prior experience in outpatient THA procedures.

## Methods

A dedicated outpatient set-up with predefined inclusion criteria, including only the first procedure of the day and requiring fulfilled functional discharge criteria before 5.30 p.m. Patients were planned for general anaesthesia with propofol and remifentanyl. All received high-dose glucocorticoid, a postoperative opioid-sparing regimen and one dose of rivaroxaban as thromboprophylaxis.

## Results

From September 2022 to January 2023, 58 patients had same-day THA contributing 38 % of all THA procedures. The median age was 63 years; 43% were females, and 23, 60, and 17% were

ASA I, II, and III, respectively. Discharge on day of surgery was achieved in 50 (86%) patients. Of the 8 patients requiring transfer to the orthopaedic ward, all went home on postoperative day 1. Reasons for transfer to the orthopaedic ward were mobilisation issues, dizziness, and pain and one case of severe intraoperative bleeding. Two outpatients were readmitted the evening on day of surgery, one due to hip displacement and one due to vasovagal syncope. Of 43 patients with completed 30 days follow-up, 15 patients had contacted the orthopedic department and 3 patients had been to the emergency ward within the first month.

## Conclusions

Despite no previous outpatient experience, implementation of a published outpatient THA protocol enabled successful discharge on day of surgery in 85% of outpatient procedures within the initial five-month period.

# Staff and economy aspects in outpatient total hip arthroplasty in a public health care system.

Christoffer C. Jørgensen, Christian S. Hansen, Christian Rothe, Jessie Hansen, Simon Serbian, Kai W. Lange, Department of Anesthesia, Hospital of Northern Zealand, Hillerød, Denmark

## Aims

To investigate the impact on economy and significance to shortage of staff when implementing an outpatient total hip arthroplasty (opTHA) protocol.

## Methods

Expenses for opTHA were compared to staying one night at our public hospital (ipTHA) and expenses related to outsourcing to the private sector (psTHA). A business case on the estimated expenses related to performing ipTHA and psTHA was acquired from the hospital's Financial Department. Modifications were made to the ipTHA expenses to reflect opTHA. Information on nursing vacancies in the mixed elective orthopaedic ward and patient cancellations was obtained from the Human Resources department. The savings after six months of opTHA were calculated based on the number of procedures between September 2023 and February 2024.

## Results

The expenses for opTHA, ipTHA, and psTHA were estimated to 22.149, 25.247, and 39.196 Danish kroner (DDK), respectively. Expenses to orthopaedic nurses and facility management (cleaning, food, etc.) attributed to about 85% of overnight stay expenses. All additional expenses costs, including the outpatient clinic, remained unchanged. There were, on average, ten vacant nurse positions, leading to eight fewer beds and potentially two cancelled ipTHAs daily - one of which was converted to opTHA. After five months, 58 planned opTHAs were completed of which 50 were discharged on day of surgery. Estimated savings were 154.899 and 988.712 DDK compared to ipTHA and psTHA, respectively.

## Conclusions

In hospitals with shortage of nursing staff, outpatient THA can reduce cancellations and expenses compared to inpatient THA and especially to outsourcing procedures to the private sector.

# Efficacy and safety study of remimazolam combined with alfentanil in gynecological hysteroscopic day surgery

Hongyi Xiao, Yaxin Wei, Guimin Dong, Fanceng Ji, Weifang People's Hospital, Shandong Second Medical University, Weifang People's Hospital, Weifang People's Hospital

## Aims

The aim of this study was to compare the efficacy and safety of the induction and maintenance of anesthesia in gynecologic day surgery between remimazolam and propofol combined with alfentanil.

## Methods

This study is a prospective, randomized, controlled, non-inferiority study. Patients who underwent elective gynecological day surgery in Weifang People's Hospital were selected and randomly divided into group R (remimazolam group, n=101) and group P (propofol group, n=101).

## Results

The success rate of sedation in group R and group P was 100 % the success rate difference between the two groups ( R group-P group ) was 0, and the rate difference was 95 % confidence

interval ( -2.78 % , 2.78 % ) the lower limit is greater than the set non-inferiority threshold of -8 % , indicating that the success rate of remifentanyl anesthesia sedation is not inferior to propofol. The time to fall asleep in group R was slightly longer than that in group P ( median, 90.00 vs 80.00 s,  $P < 0.01$  ). The recovery time of group R was slightly faster than that of group P ( median, 3.00 vs 4.50 min, Role of Prophylactic Tranexamic Acid  $P < 0.01$  ). The total adverse reactions in group R were significantly lower than those in group P ( 7.43 % vs 49.50 % ,  $P < 0.01$  ).

## Conclusions

In gynecological day surgery, the sedation success rate of remifentanyl combined with alfentanil is not inferior to that of propofol combined with alfentanil.

# Risk prediction model of delayed discharge after day-surgery ERCP based on nomogram

Xiaobing Du, Yanfen Li, Yanan Li, Qi Wang, The First Affiliated Hospital of Zhengzhou University

## Aims

To explore risk factors and build a risk prediction model of delayed discharge after day- surgery endoscopic retrograde cholangiopancreatography(ERCP) using nomogram to provide a simple-to-use clinical basis for the early prediction of delayed discharge.

## Methods

This study is a retrospective cohort study including 203 patients who had accepted day- surgery ERCP in our institution from January 2023 to October 2023 were divided into two groups (the delayed discharge group (37 cases, 18.2%); the normal discharge group(166cases,81.8%). Univariate and multivariate logistic regression analysis were used

to analyze the risk factors for delayed discharge. Besides, the nomogram prediction model was established by the logistic regression analysis. Evaluating the predictive value of the model by ROC curves, calibration curve and decision curves(DCA).

## Results

Risk factors for delayed discharge were multiple disease diagnosis, postoperative discomfort, postoperative 6-hour C-reactive protein, postoperative 6-hour amylase, OR(95%CI) were 4.787(2.080,11.016), 2.541(1.082,5.967), 2.477(1.108,5.536), 3.599(1.478,8.765) respectively. Using the variables and regression models, draw the nomogram. The area under the ROC curve is 0.778(0.701,0.856), the sensitivity and specificity of the model were 0.811 and 0.733, respectively. The Youden index is 0.444. The results of the Hosmer Lemeshow test showed that the P-value was 0.488. The calibration curve is close to the ideal curve, while the DCA curve is far from the baseline, indicating good consistency between the predicted results and the actual outcome.

## Conclusions

The risk of delayed discharge for day-surgery ERCP is high. The prediction model has certain accuracy. Clinical medical personnel should pay timely attention to such patients, provide good perioperative care, and avoid delayed discharge.

# Comparison of Anesthetic Effects of ciprofol and Propofol in Gynecological Day Surgery

Shuwen Zhang, Yan Man, Guimin Dong, Fanceng Ji, Weifang People's Hospital, Shandong Second Medical University, Weifang People's Hospital, Weifang People's Hospital

## Aims

Compare the effectiveness and safety of ciprofol and propofol in gynecological day surgical anesthesia.

## Methods

A total of 116 patients who plan to undergo gynecological day surgery were randomly divided into two groups: ciprofol group (group C) and propofol group (group P), respectively, during anesthesia induction, with a dose of 0.5mg/kg of ciprofol and 2mg/kg of propofol administered intravenously for 1 minute. For those who do not fall asleep after 2 minutes of injection, 0.25mg/kg of ciprofol and 1mg/kg of propofol were added, with an interval of 1 minute between each additional dose. For those who add more than 2 times, anesthesia failure is considered.

## Results

The success rates of anesthesia in both groups were 100%; The recovery time of patients in the group C was longer than that in the group P ( $P < 0.05$ ); The incidence of injection pain in patients in the group C was lower than that in the group P ( $P < 0.05$ ); The BIS value of patients in the group C was lower than that in the group P ( $P < 0.05$ ); There was no statistically significant difference in the time to fall asleep, number of additional medications during surgery, limb activity, intraoperative blood pressure, heart rate, and pulse oxygen saturation;.

## Conclusions

The anesthesia induction effect of 0.5mg/kg dose of ciprofol in gynecological day surgery was non-inferior to that of 2mg/kg dose of propofol, and the incidence of injection pain is lower



# Treatment of Missed Abortion in a Daytime Surgery Hysteroscopy Unit

Ying Liu, Aijie Xie, Xian Wu, Xiaoqin Gan, Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science, Chengdu

## Aims

To evaluate the feasibility and subsequent pregnancy outcomes of treating missed abortion in a daytime surgery hysteroscopy unit.

## Methods

A total of 122 patients were included in the study from January 2021 to December 2022. The patients' perioperative data were collected from the hospital electronic medical record system, including patients' demographic characteristics, surgical characteristics and postoperative recovery. The records of readmissions, emergency visits and subsequent pregnancy were made by telephone follow-up.

## Results

The average age of the patients, gestational week when diagnosed, and size of intrauterine pregnancy tissue were  $31.90 \pm 4.29$  years,  $9.72 \pm 1.52$  weeks, and  $30.44 \pm 12.32$  cm, respectively. The median surgery time was 18 minutes, and there were no perioperative

complications such as uterine perforation, hematorrhea and infections. There were also no emergency visits or readmissions after discharge, and no additional intrauterine adhesions occurred after surgeries. In our study, 97 patients had no contraception after surgery, in which 69 patients (71.13%) were re pregnancy with a median time of 10 months after surgery. Among them, 61 patients had a gestational week greater than 22 weeks, while in the remaining 8 patients, 3 patients had abortions, and 5 patients had missed abortion again because of immune problems (2), incomplete septate uterus (1), recurrence of intrauterine adhesions (1), and unknown reasons (1).

## Conclusions

This series showed that missed abortion may be successfully treated in a daytime surgery hysteroscopy unit and it could obtain good subsequent pregnancy outcomes after surgery.

# Estimating the effectiveness of Enhanced Recovery After Surgery procedures on ambulatory thoracic surgeries: a single center retrospective study

Yuejia Cheng, Xiaoxin Liu, Xumin Hou, Wentao Fang, Jingxiang Wu, Yue Zheng, Junyi Yuan, Department of Medical Administration, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, Department of Nursing, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, Department of Hospital president, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, Department of Thoracic Surgery, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, Department of Anesthesia, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, Department of Medical Administration, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, Department of Information Center, Shanghai Chest Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China

## Aims

The study was aimed at establishing and applying a set of evaluation indicators associating with the Enhanced Recovery After Surgery (ERAS) procedures, in order to promote the quality of ambulatory thoracic surgeries.

## Methods

There were 3516 patients enrolled in the observational study. They all underwent pulmonary wedge resection and were diagnosed with pulmonary malignant tumor from January to December in 2023. Eleven key indicators were accessed, according to the guidelines for ERAS after lung surgery. There were 3 indicators concerning the preoperative preparation (including nutrition, smoking and drinking, anaemia), 6 indicators concerning perioperative phase (including preoperative fasting, normothermia maintenance, combined anaesthetic techniques, paravertebral blockade, dexamethasone administration, VATS approach), and 2 indicators concerning the postoperative intervention (early mobilization, early oral feeding).

## Results

There were 1806 patients discharged within 48 hours, accounted for 51.4% of all. They had a significant higher proportions of clear fluids intake 2h before the surgery (39.8% v.s. 1.1%,  $P < 0.001$ ), paravertebral blockade (88.6% v.s. 80.9%,  $P < 0.001$ ), and a shorter anesthetic duration (1.37h v.s. 1.55h,  $P < 0.001$ ) than others. Other indicators were all similar between groups (95.7% of smoking and drinking control, 99.8% of VATS approach application and 92.6% of early motivation on the day of surgery). In the meantime, patients discharged within 48 hours had a lower proportion of taking the postoperative analgesia pump treatment (60.4% v.s. 98.9%,  $P < 0.001$ ) and 5.6% lower rate of readmission ( $P < 0.001$ ).

## Conclusions

Establishing and supervising ERAS indicators helped to standardize clinical pathways. Therefore, the systematic pathway has potentially promoted the development of ambulatory thoracic surgeries among malignant tumor patients.

# The feasibility of administering preoperative free water to patients undergoing gynecological ambulatory: A Pilot Study

Xin Rong, *The First Affiliated Hospital of the Army Military Medical University*

## Aims

Feasibility of preoperative free water intake in gynecological surgery patients and effects on gastric volume, blood glucose and blood gas analysis before anesthesia.

## Methods

This single-center pilot study included 60 patients from two cohorts: the test group required preoperative fasting for 8 h, free carbohydrate drinks (up to 2 ml/kg h) to 2 h before anesthesia, and free warm water to 30 min (up to 0.5 ml/kg h); the control group routinely fasting for 8 h before surgery for 4 h. Before anesthesia, bedside ultrasound technology was used to measure the 45° half sitting position and the anterior and posterior diameter, calculating the cross-sectional area (cross-sectional area, CSA) and gastric volume (gastric volume, GV) of the two positions. After anesthesia, arterial blood was collected from the dorsal foot artery for blood gas analysis, BS determination, and

intraoperative vomiting.

## Results

Under half sitting, the GV was ( $54.56 \pm 11.21$ ) ml/kg and ( $34.43 \pm 9.20$ ) ml/kg, respectively, and the GV of the test and control groups was ( $20.9 \pm 10.8$ ) ml and ( $13.1 \pm 6.5$ ) ml, BS, PCO<sub>2</sub>, BE and HCO<sup>-</sup> were higher than the control group, and the differences were statistically significant ( $P < 0.05$ ). No intraoperative aspiration occurred in either group.

## Conclusions

Free water drinking before surgery can avoid or improve the hypoglycemia and metabolic acidosis caused by routine preoperative diet prohibition, although it can increase the gastric capacity before anesthesia without increasing the risk of aspiration.

# Standardized and Procedural Anesthesia Management for Children with "Daily return Hernia"

Zhang wei, *Zhengzhou Central Hospital of Zhengzhou University*

The incidence of inguinal hernia in children under 1 year old is high. Generally, hernias that have not closed for children more than 6 months need surgical treatment. Laparoscopic high ligation of hernia sac is a very mature day surgery. Standardized and streamlined anesthesia management scheme is helpful for the operation. "No anxiety" separation can reduce the crying and fear of children before operation. During the operation, tracheal intubation was used for general anesthesia, and venous maintenance met the requirements of multi-mode analgesia: endoscope TFP block anesthesia combined with local infiltration can effectively solve Children's pain problem during and after operation.

PACU's "three-step" recovery can effectively reduce early complications. Step 1: extubation under deep anesthesia and sequential high-flow oxygen inhalation reduce the occurrence of respiratory spasm and hypoxemia. 2: "re-hypnosis" smoothly passes through the irritability and crying period in the early stage of awakening. 3: early companionship and open diet. Recovering for 2 hours and accompanied by them family, and giving them water, opening a small, multiple breast milk or milk powder greatly improves the comfort of children and the satisfaction of family. The "three-step" resuscitation strategy effectively solved the problems of early detection and early treatment of postoperative bleeding, pain, residual anesthetic drugs, nausea and vomiting and other adverse reactions. Under the premise of ensuring surgery safety, this management scheme improves the operability of children leaving hospital safely within 6 hours after operation, and successfully helps to complete the "daily return" operation mod and discharge within 12 hours.

# The application of LEARNS and Aidet communication model in health education for patients undergoing gynecological day surgery

Hui Wang, First Affiliated Hospital of Army Medical University

## Aims

To analyze the effect of learning combined with AIDET communication model in multimodal health education for patients undergoing gynecological day surgery.

## Methods

The study 2023 60 patients with uterine leiomyoma who underwent day surgery in the day ward of the First Affiliated Hospital of the Army Medical University from January to June, the patients were divided into control group (N = 30) and observation group (N = 30) by retrospective analysis. The control group used the traditional method to carry out health education, while the observation group used the learning-AIDET communication model to set up the learning-AIDET communication group and establish a standardized process, apply LEARNS to the AIDET communication model for health education. Self-rating anxiety scale (SAS), self-rating depression

scale (SDS), self-management behavior scale and satisfaction degree were used for statistical analysis.

## Results

The scores of SAS and SDS in the Observation Group were significantly lower than those in the control group ( $P < 0.05$ ). The scores of self-management ability and hospital satisfaction in the observation group were significantly higher than those in the control group ( $P < 0.05$ ) Conclusions

The application of the communication model LEARNS with Aidet in the health education of gynecological day operation patients can reduce the negative emotion of the day operation patients, improve the self-management ability of the patients, and greatly improve the satisfaction of the patients in the hospital, the clinical effect is remarkable and it is worthy of wide application.

# Transperitoneal Laparoscopic Adrenalectomy in Day Surgery: The UK Experience

Helena Hanschell, King's College Hospital NHS Foundation Trust

## Aims

Advances in minimally invasive surgery have enabled many laparoscopic procedures to be performed in the day surgery setting. However, this is not the case with adrenal procedures, which typically have average length of stays of 3 days. We investigated the feasibility, safety, and cost-effectiveness of same day adrenalectomy (SDA).

## Methods

Between 01 September 2021 and 28 February 2023, 30 patients with primary hyperaldosteronism (PHA) or Cushing's syndrome (CS) were prospectively matched at our centre. We assessed the impact of a same day discharge pathway (SDA cohort; n=10) or inpatient adrenalectomy (PIPA cohort; n=20) on predefined composite outcomes. We validated results using a matched cohort (n=40) from our retrospective in-patient adrenalectomy registry (RIPA cohort) and merged all inpatients (IPA cohort).

## Results

The mean age was  $51.3 \pm 8.5$  years, with 57% male and 96.7% ASA II. Lesion size was  $17 \pm 9$ mm (range 5-40mm), 43.3% on the right and 80% PHA. There were no differences for outcome predictors or modifiers across matched cohorts. 100% of SDA patients were discharged on the same day with no complications or readmissions (primary endpoint). This was the case in none of the PIPA, RIPA or IPA cohorts ( $\chi^2 > 57$ ;  $p < 0.0001$ ). 100% of SDA, 90% of PIPA (n.s.), 33% of RIPA (33%;  $\chi^2 = 14.6$   $p < 0.001$ ) and 51.5% of IPA ( $\chi^2 = 8.5$   $p < 0.01$ ) achieved the secondary endpoint (discharge within 23 hours with no complications or readmission). Costs were significantly lower for the SDA cohort and patient satisfaction was 100%.

## Conclusions

We provide novel evidence that same day discharge after adrenalectomy is achievable, safe, cost-effective and well-perceived.

# Creating new pathway for day surgery hip replacement

*Maria Ekknud Larsen, Lene Høegh Chistensen, Anne Marie Kodal, Hanne Baden Nielsen, Lead nurse, Day surgery unit, North Zealand Hospital*

## Aims

An increase of the day-surgery-nurses (DSN) competence level, when implementing a new protocol for out-patient total hip arthroplasty (THA).

In 2026 North Zealand hospital is moving into a totally new hospital. Before moving as many new workflows are tested and implemented. Traditionally the pathway for THA patients were characterized with lots of contacts and shifts in wards. A risk for patient safety, but most of all outdated regarding shift towards more and more ambulatory surgery.

## Methods

The DSN didn't have the qualifications to handle the pathway for THA, a program for competence optimizing were conducted. They need qualification to prepare the patient before surgery, handle the recovery time, postoperative X-ray, physiotherapy, and preparation for the discharge to the home.

This was a new pathway for the DSN. Education was established in collaboration with the head nurses and staff from the central

recovery room, the orthopedic unit, and the physiotherapists. Starting in august. Model for improvement was the core approach to the change, to optimize the pathway.

## Results

By September 2023 the first patients were followed the new pathway. By January 58 patients have been undergoing the new pathway for THA. 86% of the patients were discharged same day. Almost all patients would do it again.

The nurses have reported introduction successful, therefore the nurses concludes that they can handle more patients a day, and they are ready to extend the population also including the total knee arthroplasty.

## Conclusions

When starting a new pathway its essential to gain experience from all specialties already involved in the pathway.

# System of Ambulatory Medical Model: An experience from northwest of China

*LI Ruishu, LIU Xiaonan, WANG Quan, Ambulatory Surgery Center, The First Affiliated Hospital of Air Force Military Medical University*

## Aims

Shift Handover System is one of the key elements on the patients' safety. However, since the traditional system demonstrates that the unequal access to medical information, untimely and inefficient communication among medical staffs, it is urgently need a new one which is suitable for the ambulatory surgery model.

## Methods

The new Shift Handover System is established and named YTT (Yesterday-Today-Tomorrow) Shift Handover System, which means that the doctor on duty would summary yesterday's medical operation, the chief resident physician would report the number of surgery categories today and related special requirements, and the medical assistants would arrange tomorrow's surgical procedures and schedules. Meanwhile, the

effectiveness is assessed through recording patient cancellation rates, between the period of before- and after the clinical practice of the new model.

## Results

Comparing with the rate of surgical cancellation in before- (0.75%, 9/1204), there was only one patient in after- (0.07%, 1/1455) cancelled the surgical arrangement on the day.

## Conclusions

The current single-center primary data from the northwest of China showed that YTT Shift Handover System is a potential, effective model to ensure the operation of ambulatory surgery in China.

# Patient-perceived quality of care in ambulatory surgery patients at a Danish hospital

Irene Junker Jakobsen, University Hospital - Esbjerg, Denmark

## Aims

One of the most important conditions for patients to experience quality in their encounters with the healthcare system, is that the healthcare professionals show care. This is shown by a large Danish national report "Patients have a say – this is quality for us". Therefore, the aim was to explore how ambulatory surgery patients perceive the quality of care.

## Methods

The study was conducted at the unit for Ambulatory Surgery at Esbjerg Hospital, Denmark. A questionnaire including items from the Good Perioperative Nursing Care Scale, the National Danish Survey of Patient Experiences and items relating to quality of care was distributed to adult patients four days after surgery. Data was collected from August 2023 to September 2023 and 94 patients completed the survey (response rate: 40%).

## Results

The majority of patients had a positive perception regarding the quality of care. Thus, overall 96% of patients experienced that the healthcare professionals showed care for them. In particular, the patients felt the staff treated them with consideration and respect and that they were listening and present. Also, there was shown respect for patients' bashfulness. However, there were also aspects of care that could be improved. Some patients did not feel that there was sufficient time for them at the recovery room.

## Conclusions

Overall the quality of care was considered extremely good, but there is improvement to be found in some areas in the patient pathway.

# Systematic Review of Optimal Evidence for Preoperative Assessment Management in Elderly Day Surgery Patients

Dai Zhangzhang, School of Nursing, Huazhong University of Science and Technology

## Aims

To systematically review and summarize the best available evidence regarding the preoperative assessment management of elderly patients undergoing day surgery, aiming to provide a comprehensive reference for clinical practice.

## Methods

A systematic literature search was conducted, with two researchers trained in evidence-based practices rigorously evaluating the included literature in terms of quality, evidence extraction, and integration. Literature types included clinical practice guidelines, expert consensus, systematic reviews, evidence summaries, and cohort studies. Data were sourced from UpToDate, BMJ Best Practice, Joanna Briggs Institute, Guidelines International Network, Scottish Intercollegiate Guidelines Network, Cochrane Library, Embase, PubMed, Elsevier, Sinomed, Web of Science. Searches were performed on MEDLINE, CNKI, National Guideline Clearinghouse, Chinese Day Surgery Collaboration Alliance, Canadian Medical Association Clinical Practice Guidelines Database, National Institute for Health and Care Excellence, and New Zealand

Guidelines Group website, with searches conducted up to January 31, 2024.

## Results

This study included 16 high-quality articles, summarizing 23 best evidence items across five domains: assessment timing and methods; assessors; assessment settings; assessment content; and interdisciplinary team assessment training. Of these, 15 items were categorized as "strong" evidence, 3 as "weak" evidence, 6 as level 1 recommended evidence, and 3 as level 2 recommended evidence.

## Conclusions

Day surgery patients exhibit a trend of advanced age and comorbidities. This study systematically summarized the optimal evidence for the preoperative assessment management of elderly day surgery patients, providing a basis for effective preoperative assessment management by clinical healthcare professionals. This contributes to reducing the incidence and mortality rates associated with day surgery in elderly patients.

# Application of high-focused ultrasound ablation of uterine fibroids in ambulatory surgery center

Yanli Chen, Zhimin Wu, Zuxue Zhang, Yuya Dou, Department of Gynecologic Oncology, the First Affiliated Hospital of Army Medical University

## Aims

To explore the application effectiveness of high focused ultrasound ablation of uterine fibroids in ambulatory surgery center.

## Methods

From April 2023 to December 2023, 158 patients with uterine fibromatosis who underwent day surgery were designed as the study group, and 156 patients who underwent laparoscopic myomectomy were taken as the control group. Telephone follow-up was performed on postoperative days 2, 3, and 30. The operation, postoperative complications and patient satisfaction of the two groups were analyzed.

## Results

The intraoperative blood loss, anesthesia time, 6 hours postoperative pain score, hospitalization cost and postoperative complications in day surgery mode were significantly lower than those in the laparoscopic group ( $P < 0.05$ ), and the patient satisfaction in the study group was higher than that in the control group, and the difference was statistically significant.

## Conclusions

High-intensity focused ultrasound uterine fibroid ablation by day surgery mode can reduce intraoperative blood loss, reduce postoperative pain, reduce hospitalization costs and postoperative complications, improve patient satisfaction, and is safe and feasible, which is worthy of application and promotion.

# Perioperative management of elderly patients undergoing day-case surgery: current evidences review

Mei Wu, Lu Xia, Long Chen, Yamin Xu, Huadong Hospital Affiliated to Fudan University

## Background

Perioperative management of elderly patients with day-case surgery is important to the medical efficacy and safety. We aimed to evaluate and summarize the current evidence for the perioperative management of elderly patients with day-case surgery.

## Methods

This study was a systematic review design. We searched BMJ Best Practice, International association for ambulatory surgery (IAAS), China ambulatory surgery alliance (CASA), JBI, Cochrane and Pubmed, CNKI, Wanfang, SinoMed databases for studies on the perioperative management of elderly patients with day-case surgery up to July 31, 2022. Three researchers independently evaluated the quality of the literature and extracted data, and extracted evidence from the literature that met the quality standards.

## Results

A total of 11 studies were included, including two guidelines, four expert consensus articles, and five evidence summaries. The best evidence summarized includes 26 evidences in five stages of perioperative management of elderly patients with day-case surgery, which involves the importance of perfecting preoperative screening and surgery appointment procedures in the prehospital stage, preoperative management items after admission, intraoperative management, three-stage postoperative rehabilitation management and post-discharge follow-up management.

## Conclusion

Pre-operative management and nursing care based on those evidences should be included in clinical practice to improve the safety and prognosis of elderly patients with day-case surgery.

# Evaluating the Safety and Efficacy of Multisite Local Anesthesia in Daytime Hysteroscopic Surgery

Ruiyue Li, Department of Obstetrics and gynecology, Chongqing Health Center for Women and Children Chongqing, 401120, China

## Aims

To evaluate the efficacy and safety of multisite local anesthesia in the treatment of endometrial polyps (EP) by hysteroscopy

## Methods

Patients with EP were allocated into three groups: Group A (25 patients) received general anesthesia, Group B (25 patients) underwent multisite local anesthesia, and Group C (20 patients) underwent hysteroscopy without any anesthesia. The Visual Analogue Scale (VAS) was used to assess pain at 5 and 10 minutes post-operation onset, and at 30 and 60 minutes post-surgery, specifically comparing Groups B and C. Additionally, operation duration, blood loss, and postoperative vomiting were compared across all three groups.

## Results

The VAS of B and C groups at 5 and 10 minutes post-operation onset were  $4.3 \pm 1.0$ (B) and  $5.7 \pm 1.4$ (C),  $3.2 \pm 0.8$ (B) and  $6.0 \pm 1.2$  (C) respectively. At 30 and 60 minutes post-surgery the VAS were  $2.7 \pm 1.0$ (B) and  $3.2 \pm 1.4$ (C),  $2.0 \pm 0.8$ (B) and  $2.1 \pm 1.0$  (C) respectively with all differences being statistically significant ( $P < 0.05$ ). The operation duration for Groups A, B, and C were 12.0, 12.2, and 15.3 minutes, respectively, with Group C showing a significantly extended duration. Blood loss of three group were 5.6ml(A), 5.8ml(B), 6.2ml(C) without discrepancy. The incidence of postoperative vomiting was 12% in Group A, 4% in Group B, and 0% in Group C.

## Conclusions

Hysteroscopy for endometrial polyps (EP) utilizing multisite local anesthesia demonstrates a high clinical efficacy in pain reduction, without prolonging operation time or increasing bleeding. Furthermore, multisite local anesthesia contributes to a reduction in postoperative vomiting, facilitating quicker patient recovery after surgery.

# Anesthetic Management of Stiff-Person Syndrome at an Ambulatory Surgery Center

Adrienne Gomez, MetroHealth Medical Center

## Introduction

Stiff-person syndrome (SPS) is a neurological disorder that results in painful muscle spasms and rigidity that can ultimately decrease mobility [1]. SPS has an incidence of 1 to 2 persons per million per year [1], and its pathogenesis has yet to be fully understood; however, it is thought to be secondary to an autoimmune process mediated by anti-glutamic acid decarboxylase antibodies. Postoperatively patients are at an increased risk for prolonged mechanical ventilation secondary to hypotonia [1].

## Case Description

We present the case of a 58-year-old male (122kg, BMI 32.6 kg/m<sup>2</sup>) with a past medical history significant for hypertension, obesity, epilepsy, deep vein thrombosis on anticoagulation, and SPS presenting to an ambulatory surgery center (ASC) for extraction of all remaining teeth under general anesthesia. The patient underwent general anesthesia (GA) with an endotracheal tube (rocuronium 30mg) and was extubated successfully at the end of the procedure. In the PACU, the patient was

hemodynamically stable, work of breathing was within normal limits, pain was controlled, and the patient did not endorse nausea. He was subsequently discharged to his nursing facility and was doing well post-operatively without complications.

## Conclusion

Multiple cases have described prolonged mechanical ventilation secondary to hypotonia in patients with SPS. Previously, episodes of muscle weakness were thought to be triggered by volatile anesthetics and neuromuscular blocking drugs, but there have been multiple cases describing successful GAs in patients with SPS. Our case is the first case documented of a patient with SPS who underwent an elective general anesthetic at an ASC without complications.



# When laparotomy meets ERAS: Discuss the clinical effectiveness and safety of transabdominal multiple hysteromyectomy as Outpatient surgery

Ziru Yan, Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China

## Aims

To compare the clinical effects of transabdominal multiple hysteromyectomy between traditional Gynecological department and the Gynecological Day Surgery Center with ERAS (Enhanced recovery after surgery).

## Methods

This is a retrospective cohort study. 9 transabdominal multiple hysteromyectomy patients with ERAS( no bowel preparation, no urinary catheter, multimodal postoperative analgesia, no intraperitoneal drain, early mobilization as soon as possible after surgery, oral intake and regular diet as soon as discharging from post-anesthesia care unit) were included and compared with 10 patients with transabdominal multiple hysteromyectomy in traditional Gynecological department from January 2023 to January 2024 in Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China.

The operation indexes and postoperative complications and pain (such as operative time, blood loss, postoperative activity time,

postoperative exhaust time, infection, urinary retention, poor incision healing, the time in hospital, hospitalization expenses, etc) were compared.

## Results

In both transabdominal multiple hysteromyectomy with ERAS and traditional surgery groups, the blood loss, operative time, urinary retention, poor incision healing had no significant differences. However, the postoperative activity time, pain, postoperative exhaust time, the time in hospital and hospitalization expenses were less in ERAS group than traditional groups.

## Conclusions

With ERAS, transabdominal multiple hysteromyectomy is safe and effective. However, compared with traditional transabdominal multiple hysteromyectomy, transabdominal multiple hysteromyectomy with ERAS has more advantages in improving postoperative recovery, fasting postoperative exhaust, relieving postoperative pain, time and cost saving.

# The safety and effectiveness of same-day discharge in single site laparo-endoscopic surgery for adnexal disease in gynecology

yujian jia, Department of Gynecology, Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China

## Aims

Study the safety of same-day discharge in single site laparo-endoscopic surgery for adnexal disease in gynecology and the influencing factors of same-day discharge

## Methods

From June 2022 to June 2023, a total of 179 patients with infertility, fallopian tube hydrops, Ovarian cyst and other daytime operations were collected in the daytime operating area of Chengdu Women and Children's Central Hospital. According to whether they were discharged on the same day of surgery, they were divided into two groups: daily group and the non-daily group . Single hole Laparoscopy was used in both groups, and the hospital stay was less than 24 hours; Compare the basic information of two groups: surgical disease type and surgical time period on the same day, complications, readmission within 30 days etc.

## Results

There was a significant statistical difference between the two groups in terms of surgical time period and type of disease. The rates of infertility patients, chocolate cysts, and intraoperative pelvic adhesions in the daily return group were 55.81%, 5.81%, and 34.88%, respectively, while those in the non-daily return group were 31.18%, 10.75%, and 65.59%, respectively. However, there was no significant statistical difference ( $P>0.05$ ) between the two groups in terms of basic information materials. There were no intraoperative or postoperative complications in either group, and no patients were re admitted within 30 days.

## Conclusions

It is safe to same-day discharge for Gynecological single-hole laparoscopic accessory surgery, and especially suitable for infertile patients who need Laparoscopy, Early surgery on the same day may to some extent increase same-day discharge rate.

# Fertility Outcomes of hysteroscopic incision of Uterine Septum in Outpatient and Daily care

*limei chen, Hysteroscopy Centre, Obstetrics and Gynecology Hospital of Fudan University*

## Aims

Analyzing the surgical safety, effectiveness, and reproductive outcomes of outpatient/daily hysteroscopic incision of complete and incomplete uterine septum.

## Methods

All patients with uterine septum underwent preoperative MRI evaluation with three-dimensional reconstruction of uterus, and the incision position was designed. The uterine septum was directly incised to the bottom of the uterus by hysteroscopy, about 1.2cm away from the serous layer. For the complete septum to the outer cervical opening, preserve the cervical canal septum and incise from the inner cervical opening to the fundus. Surgical related data and postoperative fertility outcomes was followed up.

## Results

A total of 728 patients were included in the clinical study, of which 286 were completely septum and 442 were incomplete

Septum. The surgery was successfully completed without any intraoperative complications in all patients. Operating time was  $20.8 \pm 6.1$  minutes (range, 7-45 minutes) and blood loss was  $8.32 \pm 5.30$  mL (range, 5-30 mL). The incidence of intrauterine adhesions after complete septum uterine surgery is higher than that of incomplete septum, mostly were mild adhesions. The preoperative spontaneous abortion/infertility rate was 32%, and the postoperative spontaneous abortion rate/infertility was 8.6%, Preterm delivery rate was 3%. 65% was by cesarean section and 35% was by vaginal delivery without cervical incompetence during pregnancy.

## Conclusion

Outpatient/daily hysteroscopic complete and incomplete uterine incision are both safe and feasible, and favor to reproductive prognosis.

# Implementation of enhanced recovery after surgery, and improve the efficiency of day surgery.

*Yi Zhong, Chongqing Health Center for Women and Children*

## Aims

To investigate the impact of optimized preoperative fasting scheme for gynecological day surgery with Intravenous anesthesia

## Methods

85 patients undergoing gynecological day surgery with intravenous anesthesia were selected retrospectively and were divided into two groups in the day surgery department of Chongqing Health Center for Women and Children from September 2023 to November 2023. The patients (n = 51) in the control group were treated with routine preoperative fasting scheme, while The patients (n = 34) in the observation group were treated with optimized preoperative fasting scheme.

## Results

The preoperative duration of water deprivation in the control group was longer than that in the observational group [(11.42±2.46) vs. (7.69±2.32) h, P<0.05]. The incidences of intraoperative and postoperative aspiration were both 0.

## Conclusions

For patients undergoing gynecological day surgery with Intravenous anesthesia, the implementation of the optimized preoperative fasting scheme can effectively shorten the preoperative duration of water deprivation, without increasing the risk of anesthesia. It can promote the implementation of enhanced recovery after surgery, and improve the efficiency of day surgery.

# Application and safety analysis of day operation management mode in gynecological laparoscopic surgery patients

*Liuhuayung, The First Affiliated Hospital of the Army Medical University*

## **Aims**

To explore the feasibility and safety of the management mode of laparoscopic surgery in gynecology.

## **Methods**

Patients who underwent laparoscopic surgery in our department from January to August 2023 were selected by using a non-randomized concurrent control study design. 92 patients admitted for single-day laparoscopic surgery were selected as the control group, and 96 patients admitted for double-day laparoscopic surgery were selected as the observation group. The control group was subjected to the routine program, the relevant examinations were improved after admission, and the general hospitalization operation program was implemented during hospitalization. The observation group implemented the day operation management mode, set up the day operation team, and optimized the perioperative management measures. The postoperative intestinal function recovery, social and economic benefits, postoperative complications and inflammatory indexes were compared between the two groups.

## **Results**

The time of hospitalization, bowel sound recovery and first anal exhaust in observation group were significantly earlier than those in control group (P<0.05). There were no postoperative complications such as fall, unplanned secondary operation and wound infection in both groups. The postoperative inflammatory indexes were compared, and the procalcitonin (PCT), neutrophil percentage (Neu%) and white blood cell count (WBC) of the two groups were all in the normal range at 24h, 3d and 7d after surgery. The hospitalization cost and patient satisfaction in the observation group were better than those in the control group, the difference was statistically significant.

## **Conclusions**

It's safe and feasible to implement the management mode of day operation in gynecological laparoscopic surgery, and has significant social and economic benefits.

# Research on the application of integrated medical and nursing rapid recovery surgical nursing in patients with moderate to severe intrauterine adhesions undergoing daytime hysteroscopic surgery

*Yang Qin, First Affiliated Southwest Hospital of Army Medical University, Chongqing400038, China*

## **Aims**

To explore the research effect of integrated rapid recovery surgery (FTS) nursing in patients with moderate to severe intrauterine adhesions undergoing daytime hysteroscopic surgery

## **Methods**

88 patients with moderate to severe intrauterine adhesions who underwent daytime hysteroscopic surgery in our hospital from January 2023 to May 2023 were selected as the study subjects. They were randomly divided into a control group (n=44) and an observation group (n=44). The control group received routine care, while the observation group received integrated medical and nursing FTS care. The pain level, adherence to external medication, and nursing satisfaction were compared between the two groups.

## **Results**

At 2 hours, 24 hours, and 3 days after surgery, the visual analogue scale (VAS) scores of the observation group were lower than those of the control group, with statistically significant differences (P<0.05). After 8 weeks of intervention, the compliance rate of the observation group with external medication was higher than that of the control group, with statistically significant differences (P<0.05); The nursing satisfaction of the observation group was higher than that of the control group, and the difference was statistically significant (P<0.05).

## **Conclusions**

The application of integrated medical and nursing FTS nursing in patients undergoing daytime hysteroscopic surgery for moderate to severe intrauterine adhesions can alleviate their pain, improve their compliance with out of hospital medication and satisfaction with nursing, and promote their recovery.

# Investigation and analysis of the current situation of the demand for whole-process management services for gynecological day surgery patients

LiLing, The First Affiliated Hospital of the Army Medical University

## Aims

To investigate the demand for whole-process management services for gynecologic day surgery patients, so as to provide a reference for optimizing medical quality and nursing services.

## Methods

Referring to relevant literature, a questionnaire on the whole-process management service needs of gynecological day surgery patients was compiled, and a questionnaire survey was conducted on 360 day surgery patients in a tertiary A hospital in Chongqing from June to December 2023, and the Kano analysis method was used to clarify the attributes of the whole-process management service needs of day surgery patients.

## Results

Among the 27 items, 20 (74.1%) were characterized as expected attributes, mainly in the dimensions of disease-related, surgical information and postoperative continuous care needs. 3 essential attributes (11.1%) were the needs of preoperative preparation, dietary guidance and tubing care; 3 (11.1%) were charismatic attributes, which were the needs of online consultation, daily activities and adverse drug reactions; 1 (3.7%) non-difference attribute was for drug storage requirements.

## Conclusions

The whole process management needs of gynecological day surgery patients are diversified, and corresponding medical services are adopted according to the diversified characteristics, actively meet the expectations and necessary attributes of patients, and provide and innovate charismatic attribute services on this basis, so as to improve patient satisfaction and improve the competitive advantage of the discipline.

# Anesthetic management of an ambulatory patient with autoimmune necrotizing myopathy presenting for transforaminal lumbar injection

Varghese L and Lebak K., Case Western MetroHealth

Autoimmune necrotizing myopathy (ANM) is a rare neuromuscular disease which presents with severe proximal upper and lower extremity weakness and severe fatigue.<sup>2</sup> Rarely, it is associated with respiratory muscle weakness leading to restrictive lung disease and chronic hypoxic respiratory insufficiency (CHRI).<sup>2</sup> The authors present a case of a 57 year old female patient (H 5'2", W 250lb, BMI of 45) with a PMHx significant for ANM associated with CHRI (on 2L O<sub>2</sub> at home with rest and 3L O<sub>2</sub> with exertion) and asthma (nebulizer q2 days and rescue inhaler qnightly). She presented to an outpatient surgical center prior to lumbar transforaminal injection. Pre-procedure vitals were significant for an SpO<sub>2</sub> of 96% on 2L O<sub>2</sub>. Anesthetic plan included MAC sedation. She received 10-20 mcg of remifentanyl bolused every 2-3 minutes to assist with pain

control and aid in keeping the patient still for the procedure. Due to its fast onset and rapid metabolization, it also allowed for safer titration and quick recovery time. Her O<sub>2</sub> requirement increased to 4L/min with sedation and prone positioning but she was able to maintain her saturation between 98-100% throughout the case and was discharged home on her baseline O<sub>2</sub> requirements. Case reports of similar patients with ANM have described severe cardiac and respiratory complications from anesthesia. Because of the potential of complications requiring post-operative inpatient admission they are not ideal candidates for ambulatory surgical centers and need to be carefully screened. Additionally, short-acting anesthetic medications are likely the safest in this patient population.

# Diagnoses - outpatient or day care surgery protocol?

Valentina Rajić, Dragana Gabrić, Igor Virag, Filip Matija Vuković, Željko Verzak, Marko Vuletić, Department of Endodontics and Restorative Dentistry, School of Dental Medicine, University of Zagreb, Dental Clinic's Day Care Surgery, University Hospital Centre Zagreb, Croatia, Department of Oral Surgery, School of Dental Medicine, University of Zagreb, Dental Clinic's Day Care Surgery, University Hospital Centre Zagreb, Croatia, Department of Neuroanesthesiology, Anesthesiology, Resuscitation and Intensive Care Medicine and Pain Therapy Clinic, University Hospital Centre Zagreb, Croatia, Department of Dental Diseases, Dentistry Clinic, University Hospital Centre Zagreb, Croatia, Department of Pediatric Dentistry, School of Dental medicine, University of Zagreb, Dental Clinic's Day Care Surgery, University Hospital Centre Zagreb, Croatia, Department of Oral Surgery, School of Dental Medicine, University of Zagreb, Dental Clinic's Day Care Surgery, University Hospital Centre Zagreb, Croatia

## Aims

The use of general anesthesia is becoming more prevalent in different dental specialties. The University Hospital Center Zagreb, Croatia provides therapeutic procedures in outpatient settings and in a Dental clinic's day care surgery.

## Methods

A total of 1,118 patients were treated between January 2019 and October 2023, under general anesthesia (7,8%) or on an outpatient basis (92,2%). Their records were reviewed for evaluation purposes.

## Results

The two most common ambulatory diagnoses were caries (44.9%) and pulp diseases (22.3%), which were similarly represented across all age groups of patients. The most common diagnoses treated in day care surgery were pulp diseases (23,0%), odontogenic cysts (18.4%), caries (12.6%), disorders related to the development of tooth eruption (12.6%), unerupted or

impacted teeth (11.5%), and anomalies of teeth and facial bones with malocclusion (9.2%). Patients older than 18 years were most commonly diagnosed with pulp diseases (31,9%) and cysts (27,7%). Patients younger than 18 years old were commonly diagnosed with disorders related to the development of tooth eruption and anomalies of teeth (25,0%) and facial bones with malocclusion (20,0%). The majority of therapeutic procedures were performed on men; 57.7% in outpatient settings and 54.0% in day care surgery. The number of patients treated in day care surgery increased 5,4 times from 2019 to 2023.

## Conclusions

Short-term operations under general anesthesia with rapid recovery and without side effects have a better impact on a patient's daily life, which contributes to the growing popularity of day care surgery.

# Effect of "Internet+" continuous nursing in gynecological hysteroscopic day surgery patients

WangPingping, The First Affiliated Hospital of the Army Medical University

## Aims

To explore the application effect of "Internet+" continuous nursing in gynecological hysteroscopic day surgery patients.

## Methods

A total of 200 patients who underwent gynecological hysteroscopic day surgery in our hospital from January to October 2022 were selected as the study subjects, and were randomly divided into the intervention group and the control group, with 100 cases in each group, the control group was given routine discharge guidance, and the intervention group was given a 3-month "Internet+" continuous care on the basis of the control group. At discharge, the disease cognition, anxiety level, quality of life level, complication rate, readmission rate, and nursing satisfaction between the two groups were compared with 3 months after discharge.

## Results

The disease cognition level, quality of life score and nursing satisfaction in the intervention group were higher than those in the control group, and the anxiety level, complication rate and readmission rate were lower than those in the control group (all  $P < 0.05$ ).

## Conclusions

Based on the application of "Internet +" continuous nursing in gynecological hysteroscopic day surgery patients, it can significantly improve patients' disease cognition, quality of life level and nursing satisfaction, reduce patients' anxiety, reduce the incidence of complications and readmission rate, adapt to the development trend of "Internet + nursing", and provide convenience for gynecological continuous nursing, which is worthy of clinical promotion and application.

# Access to guidelines made easy

*Dr Louise Olley, Dr Poonam Jani, Dr Moira Wattie, Ashford and St Peter's NHS trust, Ashford*

## Methods

<https://padlet.com/lolley4/asph-clinical-guidelines-for-anaesthesia-gjrn39gf13uapvuy>

## Results

This app was developed so all relevant guidelines were easy to access at all times.

## Conclusions

The majority of our department found accessing guidelines time

consuming. We developed an app that put guidelines all in one place and easily accessible on phone, tablet or desktop

Please let us show you!

To improve ease of access to both local and national guidelines

# Logistical Considerations for Removal of Nitrous from an Ambulatory Surgery Center

*Benjamin Fuller, University of Minnesota-Twin Cities*

## Aims

The impact of anesthetic choices on the environment is a growing concern. Nitrous oxide (N<sub>2</sub>O) remains in the atmosphere for more than 110 years and a greenhouse effect more than 250 times worse than carbon dioxide.

Beyond the clinical use, wall supply of nitrous also leads to leakage and additional greenhouse gas emission. Transitioning from a wall supply to an E cylinder supply serves two purposes, reducing leakage and forcing more conscious choice of N<sub>2</sub>O.

The smaller scale of ambulatory surgery centers (ASC) provides an easier opportunity to complete this transition and this study aims to quantify the cost of transition from wall supply to E cylinders at a small ASC in the USA with 4 ORs.

## Methods

Clinical use of N<sub>2</sub>O is recorded in anesthetic records (Epic)

automatically and was used to estimate total current monthly requirement. Cost of conversion was calculated after discussion with facilities management.

## Results

\$6300 USD to cap wall connections in ORs

\$4600 USD to add N<sub>2</sub>O manifold adaptors with pin index to anesthesia machines No net cost difference between E cylinder and building supply

## Conclusions

While in the scale of health care expenditures \$10,700 USD is not a large sum of money, it still presents a hurdle to reduction in nitrous use. Changes like this will likely require the support of institutional climate initiatives or regulation to encourage the transition.

# Clinical practice of ambulatory emergency surgery in northwest of China: A case report

LI Ruishu, LIU Xiaonan, WANG Quan, YU Deliang, Ambulatory Surgery Center, The First Affiliated Hospital of Air Force Military Medical University

## Aims

Ambulatory emergency surgery (AES) has been carried out gradually in developed countries, but less in China. This study summarized the experience of our single-center ambulatory emergency surgery to provide a reference for the local development in China.

## Methods

To complete AES, experienced surgeon always assess basic information to determine the patients who are suitable for AES management, and instruct patients to monitor symptoms and vital signs in order to wait for surgery at home safely. Meanwhile, the ambulatory surgery scheduling is well-coordinated, ensuring that AES patients receive prompt surgical interventions between different procedures. Patients undergoing AES are managed in accordance with the ambulatory surgery model, except that their treatment pathway originates from the emergency department.

## Results

On the ambulatory of emergency admission, we performed five cases, including tension-free inguinal hernia repair (n=3) and appendicectomy for acute appendicitis (n=2). Three patients (aged 38, 72, and 76) were done under our AES, and we followed up with them, finding no discomfort symptoms. The two failed patients (aged 87 and 90) mainly had postoperative lung problems caused by old age. They were transferred to the observation of the guardianship after the operation and were discharged on the third day after the operation. During follow-up, no patient complications occurred.

## Conclusions

AES is feasible to manage some potential patients according to the ambulatory emergency surgery mode in China, and the detailed criteria of selection of patients should be focused on the further studies.

# Hiatal Hernia Surgery of Ambulatory Surgery Model: An experience from northwest of China

WANG Quan, NING Pengtao, LI Ruishu, LIU Xiaonan, Ambulatory Surgery Center, The First Affiliated Hospital of Air Force Military Medical University

## Aims

To analyses that laparoscopic hiatal hernia repair combined with anti-reflux surgery can achieve admission, surgery and discharge within 24h, which is expected to be used as a ambulatory operation disease in northwest of China.

## Methods

All patients with hiatal hernia underwent surgical management using the ambulatory surgery model. We conducted a retrospective analysis of the clinical data of patients who underwent laparoscopic hiatal hernia repair combined with anti-reflux surgery between September 2018 and March 2019. Based on the discharge time, the patients were divided into the ambulatory surgery group and the failed ambulatory surgery group. We used univariate and multivariate analysis to assess the clinical relevance of factors such as age, reproductive history, complications, operation level, operation time, anesthesia time, and blood loss.

## Results

Eleven patients were included in the study. General anesthesia was administered in all cases, and intraoperative confirmation of hiatal hernia was obtained. Laparoscopic-enhanced repair of hiatal hernia mesh and fundoplication (Nissen surgery) was performed. The mean operation time was  $114.5 \pm 34.0$  minutes, ranging from 73 to 172 minutes. Ten patients were discharged on the first postoperative day, while one patient experienced significant postoperative abdominal distension and was discharged on the second postoperative day. All patients completed 30-day postoperative follow-up. The results showed significant improvement in preoperative reflux symptoms, and no serious recent complications such as postoperative bleeding, digestive tract fistula, or infection occurred.

## Conclusions

Under standard perioperative management, laparoscopic hiatal hernia repair and fundoplication in ambulatory surgery model are safe and available.

# Effect of preoperative oral carbohydrate on the postoperative recovery quality of patients undergoing daytime oral surgery: a randomized controlled trial

Weixiang Tang, Yao Lu, Department of Anesthesiology, Ambulatory Surgery Center, The First Affiliated Hospital of Anhui Medical University, Hefei 230022, China

## Aims

This study was designed to evaluate the effect of preoperative oral carbohydrate intake on the quality of recovery of patients undergoing daytime oral surgery using the quality of recovery-15 (QoR-15) questionnaire.

## Methods

Ninety-two patients scheduled for daytime oral surgery were randomly allocated to the midnight fasting group (F group,  $n = 45$ ) or the carbohydrate-Outfast loading group (O group,  $n = 47$ ). Participants in the F group fasted from midnight the day before surgery. Patients in the O group also fasted but received the Outfast drink (4 ml/kg) 2–3 hours before the induction of anesthesia. QoR-15 questionnaire, patient well-being and satisfaction were assessed before anesthesia induction and 24 hours after surgery. Postoperative exhaust time and perioperative blood glucose were also recorded.

## Results

The QoR-15 scores were significantly higher in the O group than in the F group preoperatively and postoperatively. Seven parameters representing patient well-being evaluated on numeric rating scale (NRS, 0–10) and patient satisfaction scored on a 5-point scale were higher in the O group than in the F group preoperatively and postoperatively, except for the preoperative fatigue scores and sleep quality. Meanwhile, the postoperative exhaust time was significant shorter in the O group compared to the F group, while there were no significant differences in blood glucose concentrations between these two groups.

## Conclusions

Preoperative oral carbohydrate intake could improve postoperative recovery quality, well-being and satisfaction of patients undergoing daytime oral surgery, and may serve as a treatment option for patients undergoing daytime oral surgery.

# Extension of Ambulatory Surgery Model in China: Data on Gastrointestinal Cancer Surgery Based upon a New Concept of “Planned Surgery”

WANG Quan, LI Ruishu, LIU Xiaonan, Ambulatory Surgery Center, The First Affiliated Hospital of Air Force Military Medical University

## Aims

The concept of planned surgery, which builds upon the ambulatory surgery model, involves the surgical treatment of patients with non-emergency conditions that have been fully evaluated and prepared in advance. This approach typically involves hospitalization on the day of the procedure, followed by a rapid recovery strategy during the postoperative period. In this article, we will delve into the impact of gastrointestinal tumor surgery under the auspices of planned surgery, aiming to provide valuable insights and support for its implementation.

## Methods

According to the concept of planned surgery, the clinical and follow-up data of patients who underwent level IV surgery for gastrointestinal tumors from March 1, 2021 to February 28, 2022 were analyzed. This retrospective analysis focused on patients who underwent grade 4 gastric and intestinal tumor surgery at the Ambulatory Surgery Center of Xijing Hospital.

A total of 106 patients were included in this study, all of whom were either admitted on the same day and underwent surgery immediately after admission. The aim was to promote accelerated postoperative recovery and early discharge.

## Results

In this model, the average length of hospital stay of patients with gastric cancer and colorectal cancer was  $5.34 \pm 4.65$  days and  $4.15 \pm 1.95$  days, and the proportion of hospitalization cost was 22.31% and 23.54%. The total complication rate was 13.21%. Overall patient satisfaction was over 9 points.

## Conclusions

With the concept of Planned Surgery, it is safe and feasible to reduce the preoperative hospital stay for level IV surgeries such as gastrointestinal tumors.



# Application of health-promoting lifestyle assessment system in the rehabilitation of patients after cervical conectomy in outpatient department

Yongxiu Wu, Department of Obstetrics and Gynecology, the First Affiliated Hospital of Army Medical University

## Aims

To explore the application value of humanistic care model based on Health Promotion Lifestyle Scale (HPLP-IIR) in home rehabilitation of out-patient HSIL after conectomy.

## Methods

The control group was 43 patients with routine health education after operation. On the basis of routine health education after operation, 56 patients were observed in the humanistic care mode of HPLP-IIR evaluation system. The psychological conditions such as mental resilience and self-perceived burden were compared between the two groups, and the application value during home rehabilitation was evaluated.

## Results

The observation group was compared before and after the intervention with psychological resilience (CD-RISC-25), self-perceived burden (SPB), interpersonal relationship (IR), nutrition (N), physical exercise (PA), health responsibility (HR), stress management (SM), and spiritual growth (SG) in

the humanistic care model of HPLP-IIR evaluation system [CD-RISC-25 (50.95+0.81) vs (61.16+/-1.12), SPB(30.41+0.56) vs (22.23+0.35) ( $P < 0.05$ ); IIR (13.50+0.26) vs (15.11+0.28), N (14.52+0.31) vs (19.57+0.22), PA (15.75+0.36) vs (22.59+/-0.38), HR (19.93+0.52) vs (26.36+/-0.58), SM (13.16+0.44) vs (16.48+0.38) SG (12.93+0.19) vs (16.91+0.26)] there was no statistically significant difference  $P < 0.05$ .

## Conclusions

The humanistic care model of the Health Promotion Lifestyle Scale (HPLP-IIR) evaluation system can help patients reduce psychological trauma and develop healthy lifestyle. Stimulate the intrinsic motivation of patients and improve the subjective enthusiasm of patients to be responsible for their own health behavior. Adjust the self-psychological stress state of patients, reduce the psychological pressure and bad emotions of patients, and carry out physiological recovery under the condition of reducing the psychological burden of patients, and the psychological resilience of patients is increased.

# Intraoperative hypotension and major adverse cardiac events among elderly patients undergoing noncardiac surgery

Hao Li, The First Medical Center, Chinese PLA General Hospital

## Aims

Intraoperative hypotension (IOH) is an important risk factor for major adverse cardiac events (MACE) in patients undergoing noncardiac surgery. However, the IOH threshold in elderly patients remains controversial. We therefore explored the relationship between different IOH thresholds in elderly patients and the occurrence of MACE.

## Methods

This study involved elderly patients (age of 65 years) who underwent noncardiac surgery from January 2012 to August 2019. Univariate moving-average plots and multivariate restricted cubic splines were used to determine the IOH thresholds associated with an increased risk of MACE. The relationship between each IOH threshold and MACE was assessed using univariate and multivariate logistic regression analyses by three different hypotension exposure forms.

## Results

In total, 874 of 35,262 patients developed MACE. MAP below an absolute threshold of 70 mmHg or a 25% decrease from baseline MAP was associated with MACE. When the IOH absolute threshold was 70 mmHg, the risk of MACE demonstrated a “dose-increasing” effect with changes in IOH exposure, and the risk of MACE was significantly increased when the duration lasted  $> 15$  min (odds ratio, 1.5; 95% CI, 1.21 to 1.85;  $p < 0.001$ ). The associations based on relative thresholds were not stronger than those based on absolute thresholds. The subgroup analysis showed that preoperative renal insufficiency (odds ratio, 6.3; 95% CI, 1.98 to 20.29;  $p = 0.002$ ) was a sensitive factor for IOH and MACE based on the absolute threshold.

## Conclusions

Intraoperative MAP of  $< 70$  mmHg or a 25% decrease from baseline MAP was associated with MACE in elderly patients undergoing noncardiac surgeries.

# Short Term Outcomes of Direct Anterior Approach and Posterior Approach For Total Hip Arthroplasty: A Retrospective Analysis

Dhruv Jain, Puneet Khanna, Anjaleekrishna K, Sahil Batra, Department of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, New Delhi

## Aims

Total hip arthroplasty (THR) can be performed posterior or direct anterior approach (DAA). Proponents of the DAA infer that the associated postoperative recuperation will be easier and faster and could lead to a better functional outcome. The aim of this retrospective analysis is to compare the short term outcomes of anterior vs posterior approach for total hip arthroplasty

## Methods

This retrospective study was conducted in a tertiary care centre. Adult patients (>18 years of age) with hip arthritis who underwent total hip arthroplasty via DAA or posterior approach were included. The primary outcome was comparison of length of hospital stay between the DAA and posterior approach of THA. Secondary outcomes were include comparison of blood loss, incidence of blood transfusion, ICU stay, PONV, surgery duration and complications

## Results

A total of 248 patients were included in the study out of which 124 underwent THA by DAA and 124 patients were operated by posterior approach. The length of hospital stay [median (IQR)] after surgery in DAA group was 2.5(2-4) days, while in posterior approach it was 3(2-5) days. The difference was statistically significant ( $p=0.0001$ ). Surgery duration and blood loss were lower in DAA group but not statistically significant.

## Conclusions

Based on the results of this retrospective analysis in 248 patients, direct anterior approach to THA results in lower length of hospital stay than conventional posterior approach. The anterior approach may be a suitable option to expedite recovery of patients after surgery with better short term outcomes

# Effect of nitrous oxide during oocyte retrieval on in-vitro fertilization outcomes: A retrospective study

Sana Yasmin Hussain, Shailendra Kumar, Dhruv Jain, Lokesh Kashyap, Department of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, New Delhi

## Aims

In-vitro fertilization (IVF) is a method of assisted reproductive techniques for patients suffering from infertility. Transvaginal oocyte retrieval is a day care procedure which involves administration of anaesthesia. Effect of anaesthetic agents may result in poor quality of oocyte and reduced fertility rates. Isoflurane and nitrous oxide is commonly employed for maintenance of anaesthesia during oocyte retrieval. Hence analysis of the existing data, using different anaesthetic gases will add to the sparse existing literature on the significant clinical outcomes related to day care IVF and pregnancy rate.

## Methods

This retrospective study was conducted after evaluating medical records of patients undergoing IVF procedures under anaesthesia during last 4 years (Dec 2018 – Dec 2022) were obtained from Medical Records Department. Patients undergoing IVF under isoflurane or isoflurane/nitrous were included. The primary

outcome was fertilization rate and secondary outcome were pregnancy rate, oocyte grade, cleavage rate

## Results

Number of oocytes retrieved of Grade 1 and Grade 2 quality were similar in both groups. However, grade 3 oocytes retrieved were significantly higher in N2O group ( $P < 0.001$ )

The fertilization rate [Median(IQR)] was higher in O2/Iso group but the difference was not statistically significant. [O2/Iso – 100 (87.5-100) vs N2O/Iso – 100(83.3-100);  $P = 0.07$ ]. The cleavage rate measured on day 2 and day 3 of fertilization was similar in both the groups.

## Conclusions

Grade 3 oocytes were significantly more in the group where nitrous oxide was used in addition to isoflurane. The cleavage rate, fertilization rate and pregnancy rate were similar in both groups.

# Robotics in Day Surgery: enhancing performance or slowing us down?

David Bunting, Royal Devon University Healthcare NHS Foundation Trust

## Aims

Robotic laparoendoscopic surgery trends show rapid uptake in many subspecialties including colorectal, gynaecology, urology, abdominal wall, upper gastrointestinal, bariatric and endocrine surgery. This study aimed to review trends in robotic surgery uptake across different surgical specialities and the potential advantages of robotic surgery over existing approaches. It aims to compare hospital length of stay (LOS) and operative times for a range of robotic operations.

## Methods

A literature review was conducted to identify the patterns of adoption and trends in uptake of robotic surgery across different specialties. In addition, a literature review was undertaken to assess hospital LOS, day and operative procedure durations for a range of robotic surgeries.

## Results

Trends in robotic surgery uptake are described. Hospital LOS and operative procedure durations are reported for a number of colorectal, urological, gynaecological and abdominal wall hernia operations. Examples include: median LOS for robotic hysterectomy 1 day compared with 2 days and 6 days for laparoscopic and open techniques respectively. Similarly, for robotic prostatectomy, median LOS has been reported at 1.6 days compared with 2.1 days and 3.4 days in laparoscopic and open surgery respectively. Robotic day case surgery has also been shown to be feasible in colectomy, partial nephrectomy and abdominal wall reconstruction amongst others.

## Conclusions

Robotic surgery offers a number of advantages to patients and health care institutions. There continues to be an increase in the uptake of robotic surgery in many specialties. Robotic surgery offers the potential to reduce length of stay and increase day case rates for a number of different operative procedures.

# Are we Appropriately Consenting Patients for the Risks of Post Operative Urinary Retention following Day Case Groin Hernia Surgery?

Kayleigh Spellar, Alex Laurie, David Bunting, Royal Devon University Healthcare NHS Foundation Trust

## Aims

Consent is a fundamental process within surgery. General Medical Council (GMC) guidance advises that any recognised risks of harm resulting from a procedure should be discussed. Post-operative urinary retention (POUR) is a frequently encountered risk following day case groin hernia surgery, and can give rise to unplanned overnight stay. We aimed to review how frequently POUR occurs following day case groin hernia surgery in our hospital, along with how frequently it was consented for.

## Methods

Retrospective data were collected on all patients undergoing planned groin hernia surgery in a single centre over a 6-month period between March and August 2023. Demographics, post-operative complications including POUR, and any other complications requiring hospital re-admission within 30 days were recorded. Consent forms were reviewed to identify whether POUR was documented as a risk.

## Results

128 groin hernia surgeries were carried out over the 6-month period. 13 patients (10.2%) experienced POUR, the most common complication in this group of patients. 7 of these patients did not have POUR documented as a risk factor on their consent. 46% patients overall had POUR documented as a risk factor on their consent.

## Conclusions

POUR is a common complication following groin hernia surgery. Over half of those patients who did experience POUR were not warned about this potential complication. As service improvement project has been commenced to improve the consent process for patients undergoing day case groin hernia surgery.

# Challenges with Day Care Electroconvulsive Therapy

Troels Eliassen, Regionshospitalet Gødstrup

## Aims

Electroconvulsive Therapy (ECT) is safe and effective treatment for major depression, acute risk of suicide, schizophrenia. Daycare ECT is without hospital stay. Daycare ECT is cost effective, flexible, better patients' satisfaction. Patient selection is based on suitability criteria. At our Hospital Daycare ECT is administered in the Day Care Unit.

## Methods

The primary aim is to investigate whether the patients are screened accordingly. Secondly 1) The patients received necessary information 2) Reported on time 3) The time from admission to discharge 3) Hemodynamics 4) Post ECT recovery 5) Complications 6) Challenges.

We made a retrospective chart review from October 1st, 2023 to December 31st 2023. Data was collected through a search in

patient medical records.

## Results

During the study period 132 ECT treatments were administered. The screening of patients was accurate and well communicated. There was no delay. The median time from admission to discharge was 132 mins. Two patients had arrhythmias and high blood pressure. There were few challenges where patients were restless, fiddling, talking, afraid and need for extra help.

## Conclusions

Daycare ECT function smoothly under the patient's selection criteria. The challenges noted are normal under psychiatric domain but may indicate need for a psychiatric ECT clinic.

# Development and management standard of gynecological ambulatory surgery specialized centralized management model

Wu Xian, Department of gynaecology and obstetrics, Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, 611731, China

## Aims

To explain and discuss the development and management standard of gynecological ambulatory surgery under the specialized centralized management mode in our hospital, and to provide reference for the development of gynecological day surgery in developing country like China.

## Methods

The Longitudinal Gynecological Ambulatory Surgery Study (LoGASS), which was conducted in Chengdu, China. The statistical data of Ambulatory surgeries carried out in Chengdu Women and Children's Central Hospital from May 2020 to March 2023 were analyzed retrospectively, including the total number of patients in the Ambulatory surgery center of our hospital, the types and quantities of each type of surgeries, the grade of surgery, and the length of stay distribution, etc.

## Results

In the past three years, the number of hysteroscopic surgery showed a significant increase trend, and the number of laparoscopic/hysteroscopy-laparoscopic surgery and non-endoscopic surgery increased significantly at first, and then tended to plateau.

## Conclusions

The gynecological ambulatory surgery under the specialized centralized management mode is in line with the development trend of national ambulatory surgery and has been highly recognized by the majority of patients. However, at the same time, we should further strengthen and improve the management standard of daytime mode, to break through the platform period of ambulatory surgery, achieve sustainable development, and better meet the medical needs of patients.

# Development and management standard of gynecological laparoscopic ambulatory surgery specialized centralized management model

Aijie Xie, Xian Wu, Xin Li, Hui Wang, Ying Liu, Ying Jin, Jie Yu, Mi Su, Xiaohui Wu, Yujian Jia, Li Zhong, Xia Yu, Ling Zhang, Yonghong Lin, Xiaoqin Gan, Chengdu Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu

## Aims

To explore the feasibility and safety of gynecological day-care laparoscopic surgery under the centralized management mode of specialty, and to provide a basis for the further development of gynecological day-care surgery.

## Methods

A retrospective analysis was performed for the number and growth trend of laparoscopic day-care surgery units, disease types, hospital stay, perioperative complications, and patient satisfaction in the gynecological day-care surgery ward of Chengdu Women and Children's Central Hospital from May 2020 to March 2023.

## Results

In the past three years, a total of 1503 gynecological day-care laparoscopic surgeries have been completed in our hospital, and the number of gynecological laparoscopic surgeries has increased steadily every quarter, and it has entered a plateau period after two years. Gynecological diseases mainly included ovarian cysts (38.4%), uterine fibroids (30.8%), and infertility (22.5%). The rate of delayed discharge was 2.9%, the complication rate was 3.2%, and the patient satisfaction rate was 99.0%.

## Conclusions

Gynecological day-care laparoscopic surgery is safe and feasible under the centralized management model, which is in line with the concept of enhanced recovery after surgery. It can save medical resources, reduce medical burden, and is worth promoting widely.

# Improving Management of Patients undergoing Inguinal Hernia Repair Who Experience Post-Operative Urinary Retention

Alex Laurie, Kayleigh Spellar, David Bunting, North Devon District Hospital, North Devon District Hospital, North Devon District Hospital

## Aims

Post-operative urinary retention (POUR) is a common complication following inguinal hernia repair. Detection and management are important, as left untreated POUR can result in significant patient discomfort, acute kidney injury, detrusor muscle damage and infection. The detection and management of POUR in our trust following planned day case inguinal hernia repair was varied, often resulting in unplanned admission.

## Methods

A retrospective analysis of all patients undergoing planned day case inguinal hernia repair in a single institution between March 2023 and August 2023 was performed. Patients having open, laparoscopic, or robotic repair were included. Data were collected on demographics, documentation of POUR, time to diagnosis, bladder scan volume, catheterisation, overnight stay and follow up.

## Results

124 patients underwent inguinal hernia repair. 13 patients reported experiencing POUR (10.4%). 9 patients experienced POUR during their initial admission, of which 8 had unplanned overnight admissions. 5 patients were not managed with catheterisation despite having significant volume of urine detected on bladder scan (>700ml) and reporting discomfort. 4 patients went into retention after discharge and re-presented via the emergency department.

## Conclusions

Significant variation in the detection and management of patients with POUR was noted in this cohort. Introduction of a POUR pathway in day-surgery describing both diagnosis and management has therefore been created to try and address this, to improve outcomes and reduce hospital admission for these patients.

# Modern urogynecology in one day surgery

Zsolt Domjan, Észak-budai Szent János Centrumkórház, Urology, Budapest

## Introduction

Surgical treatment of muscle floor disorders has been increasing from decades in high developed countries leads to great burden of national expences.

## Methods

This speciality of surgery is not belong to traditional field of one day treatment. More advanced techniques were developed to treat muscle floor disorders like stress urinary incontinence (SUI) and pelvic organ prolapse (POP) during the last two or three decades. Although the use of vaginal meshes is abandoned in western countries, the abdominal procedures with meshes or

suburethral slings has become the gold standard in treatments of POP and SUI. The introduction of minimally invasive techniques leads to „fast track” surgery, moreover the pandemic period teach us to use these methods with even shorter perioperative time (12h-24h), because of limited access to medical treatment.

## Results

We would like to share our experiences and results of making laparoscopic sacrocolpopexy and sling plasty in one day surgery in high volume center.

# Kidney transplant patient in ambulatory surgery – a case report

Nataša Višković Filipčić, Mislav Jelić, Tomislav Čengić, Mladen Jukić, Special Hospital Agram Zagreb, Croatia, University Hospital Centre Zagreb, Croatia, University Hospital Centre Sisters of Mercy Zagreb, Croatia, Special Hospital Agram Zagreb, Croatia

## Aims

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 requiring partial knee replacement to show that ambulatory surgery can be safely performed in this high risk patients.

## Case presentation

A 64-year-old male patients who underwent cadaveric kidney transplantation 24 years ago, with history of hypertension, hyperlipidaemia and mild aortic stenosis presented for partial knee arthroplasty. His immunosuppression consisted of cyclosporine, mycophenolate mofetil and prednisolone. His regular nephrologist check-ups revealed stable renal function (glomerular filtration rate 56ml/min/1,73m<sup>2</sup>). Informed consent stating that surgery might aggravate his renal function was obtained. Preoperative thromboprophylaxis (dalteparin) was given and his immunosuppression therapy was continued as usual.

Spinal anaesthesia following adequate intravenous prehydration 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.

## Conclusions

Careful preoperative preparation and anaesthesiologist experienced in transplant medicine and immunosuppression can make kidney transplant patients eligible for ambulatory surgery.

# Adoption of ambulatory modality in general surgery service in Hospital General de México: report of a new era first steps!

*Guzman-Gutierrez Mario, Alatmirano-Ruiz, Perez-Jaen Gloria, Jalife-Montaña, Gurrola-Luna Hector, Salinas-Padilla Miguel Angel, Guerra- De Coss Daniel, Guzman-Gutierrez Mario*

## **Aims**

We intend to communicate beyond our frontiers the beginning of a project of ambulatory surgery at Hospital General de México and become into an enthusiastic participant in the international health community in ambulatory surgery.

Hospital General de México is a public open facility founded in 1905, which takes care mainly of the population who hasn't any social security services and it's the main university campus hospital and receives patients from all over the country and even from a foreign origin. This represents the first attempt to establish not only a system but a true service of ambulatory surgery in the history of the hospital.

## **Methods**

A retrospective study was carried out gathering data from patients who underwent general surgery in ambulatory modality.

From 2019 to 2023 our service performed 1492 surgeries.

From this 1492: 24.8% were inguinal hernia repair, which in its majority were performed under local anesthesia with sedation, the rest of the surgeries were abdominal hernias, open biopsies of tumors like lipomas, laparoscopic cholecystectomies, OTB, among others.

## **Results**

Regarding hernia pathology (inguinal, umbilical, epigastric), the age ranged between 19 to 87 years old. 64.3% males 35.7% female. Average operative time was 87 minutes.

The average time in PACU was 180 minutes, ranging between 150 to 240 minutes until discharge, these cases were performed under sedation and local anesthesia, <5% of patients were hospitalized for additional surveillance.

## **Conclusions**

The ambulatory modality is a huge area of opportunity for Mexican surgery that has demonstrated to be safe, feasible and less resource demanding.

# Implementation of a published outpatient THA protocol without prior outpatient THA experience – results from the initial five months

Jorgensen CC.,<sup>1</sup> Steen-Hansen C.,<sup>1</sup> Rothe C.,<sup>1</sup> Sveen TM.,<sup>2</sup> Sundstrup MS.,<sup>2</sup> Lange KHW.<sup>1</sup>

*1 Department of Anesthesia, Hospital of Northern Zealand, Hillerød, Denmark. 2 Department of Orthopedic Surgery, Hospital of Northern Zealand, Hillerød, Denmark*

## Aims

To explore the feasibility and success rate when implementing a previously published protocol for outpatient total hip arthroplasty (THA) in a hospital with no prior experience in outpatient THA procedures.

## Methods

A dedicated outpatient set-up with predefined inclusion criteria, including only the first procedure of the day and requiring fulfilled functional discharge criteria before 5.30 p.m. Patients were planned for general anaesthesia with propofol and remifentanyl. All received high-dose glucocorticoid, a postoperative opioid-sparing regimen and one dose of rivaroxaban as thromboprophylaxis.

## Results

From September 2022 to January 2023, 58 patients had same-day THA contributing 38 % of all THA procedures. The median

age was 63 years; 43% were females, and 23, 60, and 17% were ASA I, II, and III, respectively. Discharge on day of surgery was achieved in 50 (86%) patients. Of the 8 patients requiring transfer to the orthopaedic ward, all went home on postoperative day 1. Reasons for transfer to the orthopaedic ward were mobilisation issues, dizziness, and pain and one case of severe intraoperative bleeding. Two outpatients were readmitted the evening on day of surgery, one due to hip displacement and one due to vasovagal syncope. Of 43 patients with completed 30 days follow-up, 15 patients had contacted the orthopedic department and 3 patients had been to the emergency ward within the first month.

## Conclusions

Despite no previous outpatient experience, implementation of a published outpatient THA protocol enabled successful discharge on day of surgery in 85% of outpatient procedures within the initial five-month period.

# A Pilot Anaesthesia Sustainability project – Injectomat versus Infusomat procedure in Day Surgery

*V. R. Laurberg, Aarhus University Hospital, Denmark; J. Skyttehave, Aarhus University Hospital, Denmark; L. L. Nielsen, Aarhus University Hospital, Denmark; U. Madsen, Aarhus University Hospital, Denmark; Emma Olsen, Aalborg University, Denmark; Freja Marie Tække, Aalborg University, Denmark; Lærke Emilie With Ottosen, Aalborg University, Denmark*

## Background

We conducted a small pilot study focusing on two anaesthetic procedures. The aim of the project was to investigate how much Co<sub>2</sub> each procedure emits, how much each procedure costs, and to find out how the procedures workflow effect the nurse physically, especially with regarding to hands and fingers. In the standard procedure- Injectomat- 60 ml syringes are used, which the nurses pull up by hand. In the procedure – Infusomat- the medication hangs in a drip. Life Cycle Assessments (LCA) has been conducted including all utensils used for both procedures.

## Method

In two test periods of 8 weeks for each procedure a nurse anaesthetist filled out a utensils schedule and a Quick DASH questionnaire. The Quick DASH and the number of utensils were counted and thereby the prices, Co<sub>2</sub> and the DASH score was calculated. We conducted a qualitative study through semi-structured interviews to explore relevant aspects of the two

different procedures.

## Results

During the weeks of registration 14 surgeries were performed using Injectomat and 20 surgeries using Infusomat. The use of utensils was 56.3% lower per patient using Infusomat than Injectomat, which also gave an 6.3% cost saving. In Co<sub>2</sub> there was a 56.3 % reduction when using Infusomat.

The DASH score went from 23.33 and 13.33 using Injectomat to 6.67 and 8.33 using the Infusomat.

## Conclusion

This pilot study indicates that, using Infusomat instead of Injectomat is more gentle to hands and fingers, it is more cost effective and the Co<sub>2</sub> footprint is halved



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**Mark Skues**

Email: [mskues@gmail.com](mailto:mskues@gmail.com)