

## Abstracts

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### Ambulatory Surgical Treatment of Varicose Veins Under Intradural Anesthesia pp. 524–529

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#### Introduction

Nowadays, ambulatory surgery is the fastest growing subspecialty within clinical anesthesiology, owing to the advances in anesthetic and surgical technology. Several side-effects of subdural anesthesia (post-dural puncture headache, impairing the ability to ambulate and void) can prevent the challenge of anesthesia for ambulatory patients (rapid return to street readiness). The aim of this study was to evaluate spinal anesthesia by using pencil-point needles in adult outpatient surgery (uni- or bilateral saphenectomy).

#### Material and method

We studied prospectively 520 patients operated on for saphenectomy. After vascular replacement, 10 ml/kg of Hartman solution, and a premedication with metoclopramide, 10 mg, and midazolam, 0.03 mg/kg, patients received subdural anesthesia (pencil point needle 25–27 G) with either 60 mg of mepivacaine 0.2% unilateral saphenectomy or bupivacaine 0.5% 10 mg or 0.25% 7.5 mg (bilateral saphenectomy). In every patient, we measured sensitive block, heart rate, blood pressure, surgery duration, time for hospital discharge and side-effects (nausea/vomiting, urinary retention, and PDPH).

#### Results

Unilateral or bilateral saphenectomy was performed in 80.9 and 19.1% of the patients, respectively. The age

was (mean  $\pm$  standard deviation)  $41 \pm 17$ , and 68% were women. Sensory blockade in every patient was adequate to perform the operation, and the duration of the operation was (mean  $\pm$  standard deviation)  $58 \pm 23$  min and  $136 \pm 42$  min for uni- or bilateral saphenectomy, respectively. Nausea/vomiting appeared in 6% of patients, 7% of patients presented hypotension, 4% bradycardia, 7% urinary retention, and two patients suffered postdural puncture headache. The time for hospital discharge was  $9 + 2$  h (mean  $\pm$  standard deviation), but 11% of patients had to be readmitted to the hospital.

#### Discussion

Regional anaesthesia for ambulatory saphenectomy has many advantages: short hospital stay, residual analgesia optimization of health resources and its cost-saving and cost-effectiveness. Indeed, the low incidence of side-effects and the good quality of recovery after spinal anesthesia suggest that regional anesthesia is a valid alternative for saphenectomy.

### Endoscopy in a Gynecological Day Surgery Unit pp. 530–537

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Over the last decades, we have been able to increase the number of surgical procedures undertaken in day surgery units due to two main factors: the outstanding progress in the techniques used in anesthesia and the development of endoscopy. In gynecology, this fact has been particularly significant due to laparoscopy and hysteroscopy. In this paper, we present their possibilities in our environment.

### **Microlaryngeal Surgery as Ambulatory Surgery. Results During the Period 1995–1998 pp. 538–542**

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The objective is to prove that microlaryngeal surgery is a safe procedure to include as ambulatory surgery.

We reviewed the direct laryngoscopies performed as ambulatory surgical procedures in a day surgery unit during the 1995–1998 period. In this retrospective study, 132 patients were included. The type of pathology, anaesthetic risk, intra and postoperative complications and discharge criteria were analyzed.

Only 3.78% of the patients had some intraoperative complication, three, bronchial spasm and two, skin rash. Among the causes of admission to the hospital (4.54%), social problems not related to surgical procedures (2.27%), nausea and vomiting (0.76%), fever (0.76%) and dizziness (0.76%) were most common.

We conclude that microlaryngeal surgery can be safely performed as an outpatient procedure as long as the patients are selected.

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### **Ambulatory Surgery as a Part of a General Surgery Department pp. 18–21**

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Our Department for General and Digestive Surgery started a full program for ambulatory surgery in January 1998.

In this paper, we present the activity, methods and results of the different operations performed as ambulatory surgery during this period. During the first year, 279 patients underwent surgery on the 45 working days of surgery. We noticed the low index of complications and the substitution indexes regarding programmed activity of 35.5% (global), 60% for hernias, 94.3% for hemorrhoidectomies, 96.8% for fissurectomies and 80.5% for pilonidal sinus operations.

### **Control of Post-operative Pain in Ambulatory Hemorrhoidectomy pp. 22–24**

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### **Objectives**

To evaluate the control of post-operative analgesia after hemorrhoidectomy as an ambulatory procedure in our Department and to assess the use of a topical treatment with 2% lidocaine cream (EMLAr).

### **Material and methods**

We undertook a randomized prospective study including 50 patients who suffered from III–IV degree hemorrhoids (three groups) and who underwent ambulatory hemorrhoidectomy. These patients were divided into two groups depending on whether we applied lidocaine cream on the dressing or not.

### **Results**

Both groups showed low levels of post-operative pain, and there were no statistically significant differences between the groups.

### **Conclusions**

The lidocaine cream did not significantly improve the control of post-operative pain in hemorrhoidectomy. Low figures in pain level observed, which we think are due to a good protocol for the administration of oral analgesics, making this surgical procedure for high degree hemorrhoids feasible in ambulatory surgery programs.

### **Criteria for Laparoscopic Cholecystectomy in a Program for Ambulatory Surgery pp. 25–28**

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Symptomatic cholelithiasis is one of the highest prevailing surgical pathologies, and therefore, laparoscopic cholecystectomy is the most common operation in programs for laparoscopic surgery. This is the reason for the interest in including this procedure in ambulatory surgery programs.

The greatest difficulty resides in establishing predictive criteria that will allow us to select patients who can be included in a program for ambulatory surgery.

In our search for these parameters, we designed a retrospective study using 32 variables that we considered most representative following our experience, following the literature and using the Chi-square test and a

multivariate logistic regression analysis. This statistical procedure was applied to 265 patients who underwent laparoscopic cholecystectomy and who stayed in hospital overnight. For our convenience, we divided them into those who stayed in for under 24 h, as they were operated on in an afternoon theatre program and discharged first thing in the morning, and those who stayed in over 24 h.

We can conclude, after this analysis, that ASA I patients, who have not had previous surgery and whose surgical procedure is estimated to last less than 90 min, are the best candidates for a program for ambulatory surgery. Patients whose GGT, GOT or GPT are altered or whose gall bladder has a wall of 4 mm or more, as seen with ultrasonography, or with signs of cholecystitis should not be included in such programs.

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### **Analysis and Assessment of Patients Undergoing Ambulatory Surgery pp. 66–70**

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#### **Introduction**

Ambulatory surgery is a good alternative to conventional surgery as it offers a more detailed follow-up and implication of nursing staff.

#### **Objective**

To determine the morbidity and patient's general health state after ambulatory surgery.

#### **Methods and materials**

A prospective study of all patients undergoing ambulatory surgery between September 1996 and December 1997 was carried out. Patients requiring post-operative hospitalization and those undergoing ophthalmic surgery were excluded.

#### **Results**

Ninety-four per cent of the patients studied did not present clinically significant problems. Eighty-seven problems were detected in the remaining 6% of cases, none serious in nature. The complications most frequently observed included generalized pain (28%) and bleeding or suppuration (22%). The patient's general health was excellent in 53.5% and good in 32.5%, and 0.5% were in regular/bad condition.

### **Conclusions**

Few problems were observed. The most frequent problems observed were pain, probably due to incorrect administration of analgesics, followed by bleeding, usually blood-stained gauzes. A high percentage of patients reported excellent/good general health, reflecting the acceptance of both the patient and health-care staff. The post-operative follow-up register is a good source of information.

### **Target-controlled Infusion Systems (TCI) for Sedation in Procedures Requiring Local and Regional Anesthesia pp. 71–76**

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It is general practice to complement the procedures that are carried out under local and regional anesthesia with various drugs that produce sedation in the patients. The pharmacokinetic properties of Propofol (rapid onset, short duration of action and prompt recovery) indicate that it is one of the most interesting intravenous agents in maintaining sedation.

The development of reliable infusion systems such as the target-controlled intravenous anaesthesia (TCI), gives us a safer, more predictable and easier technique than others used in the past.

The objective of this work has been to study the ideal target concentration of Propofol ( $\mu\text{g/ml}$  of plasma) when administered through a target-controlled infusion device for sedation in patients undergoing local and regional anaesthesia.

### **Use of Remifentanyl in Early Discharge of Patients Undergoing Vascular Ambulatory Surgery pp. 77–81**

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#### **Background and goals**

Remifentanyl is a selective new mu opiate receptor agonist with a rapid onset and short duration, which makes it very useful in this type of surgery as it allows early discharge of patients. The goal is to study the effectiveness and security of this drug in relation to the early discharge of patients undergoing unilateral saphenectomy and to describe a new anaesthetic technique.

## Material and methods

One hundred patients underwent unilateral saphenectomy with complete vein extraction and ligation of collateral veins, under general anesthesia. As pre-medication, 1.5 mg of bromocepham was administered 1 h before the operation. Induction was performed with 2 mg/kg of propofol and 0.07 mg/kg of atropine, and patients were intubated with 1 mg/kg of succinylcholine. An orogastric tube was then put in place and removed at the end of the operation when 4 mg of ondansetron were administered intravenously to reduce post-operative nausea and vomiting. Diclofenac (75 mg) was also administered. Anesthesia was maintained with O<sub>2</sub>/N<sub>2</sub>O (33%/66%), and 0.3–0.5 g/kg/min of remifentanyl was infused after intubation.

Halogenate gases and neuromuscular relaxants were avoided. To prevent sudden awakening and post-operative pain, midazolam and a vial of magnesium metamizol were administered intravenously 10 and 15 min before the end of the operation. Protoxid and the infusion of remifentanyl were disconnected at the end of the procedure. The criteria for discharge were based on the modified Aldrete scale and when over 8. Patient should not complain of pain, nausea, vomiting or trembling.

We studied the length of time for anesthesia and extubation in the reanimation room and before discharge.

## Results

The 100 patients were classified as ASA I or II. There were 21 men and 79 women. Microsurgery was undertaken in 42 patients. The mean anesthesia time was 48.3 min, the time for extubation was 5.2 min, and the reanimation time was 25.8 min. Discharge from hospital took place after 204 min. Complications included eight patients with nausea and vomiting, five with trembling, six with pain (VAS > 5), two with dizziness, two with hypotension and one who required re-operating. Discharge was not possible in nine cases: both cases of dizziness and hypotension, two of the patients with vomiting, one with pain, the one who underwent surgical revision and in one case due to social problems.

## Conclusions

We think that the use of remifentanyl in this type of surgery is of great help as patients can be discharged promptly, and there is no need to use halogenate

anesthetics or muscle relaxants. There were no cases of intra-operative awakening.

## Ambulatory Surgery for Cataracts. Is a Chest X-ray Necessary as a Routine Pre-operative Test? pp. 82–86

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## Objective

The aim of this study was to determine the clinical utility of preoperative chest X-ray (PCR). In our hospital, the PCR is a routine test for patients undergoing ophthalmic ambulatory surgery.

## Material and methods

A total of 1172 patients scheduled between 5/18/98 and 10/6/99 were studied retrospectively. The characteristics of the patients, type of anesthesia, length of time of surgery and time until the discharge were registered. Also, the changes in the anaesthetic or surgical management, as well as the postoperative complications, related to the findings of the PCR were recorded.

## Results

In 50 patients (4.2%), the procedure was cancelled due to causes unrelated to the radiological findings. A total of 1136 patients were operated on (56.26% were women, and 43.74% were men), with an average age of  $71.68 \pm 10.42$  years. The ASA classification was: 14.43% ASA I, 57.75% ASA II, 22.37% ASA III, and 1.87% ASA IV. Eighty-five per cent of patients showed some type of associated pathology. A total of 1158 PCR were assessed: in 13 cases (1.12%), the anomalies in the PCR advised consulting the Department for respiratory diseases. Nevertheless, in no case was the anaesthetic plan modified, and no changes in the surgical planning were made.

## Conclusions

The request of a routine PCR is unnecessary in this type of patients.