TITLE: INTRAPERITONEAL LOCAL ANESTHETICS AND SCAPULAR PAIN FOLLOWING DAYCASE LAPAROSCOPY.

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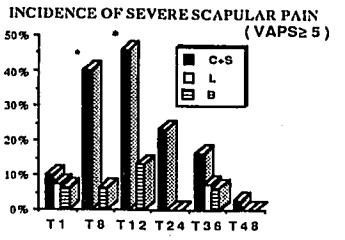
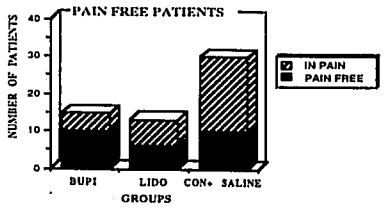
INTRODUCTION: Laparoscopy is one of the most frequently performed procedures in outpatients, and is often followed by scapular pain lasting 24-72 hours. Scapular pain often requires analgesics and may interfere with daytime activities. The aim of this study was to assess the effect of intraperitoneal local anesthetics on scapular pain after laparoscopy.

METHODS: After informed consent, 60 ASA1 women scheduled for laparoscopy under general anesthesia were randomized in 4 equal groups (n=15):group C : no peritoneal administration, group L and group B respectively received 80 ml of 0.5% lidocaine with 1/320.000 epinephrine or 0.5% bupivacaine with 1/800.000 epinephrine and group S 80 ml of saline injected under direct vision in the right subdiaphragmatic area at the beginning of surgery. Scapular pain was assessed 1.5h (recovery room) and 8h after surgery (before discharge) with a 0-10 cm visual analog pain scale (VAPS). A questionnaire was given to be completed at home including 4 VAPS to evaluate scapular pain 12, 24, 36 and 48 hours postoperatively. The questionnaire also included items concerning nausea and vomiting, abdominal pain and analgesic requirements during the first 48 hours. Statistical analysis was performed using Chi-square test with Yates correction when necessary.

RESULTS: 2 patients in group L did not respond and were excluded from the study. No side effect was noted during or after the procedure. At 8 and 12 hours postoperatively, there were significantly more patients having VAPS ≥ 5 in the control and saline groups as compared to groups receiving local anaesthetics (figure). VAPS were not different at any time between groups L and B. Furthermore, analgesic requirements were significantly lower in patients receiving bupivacaine: 10/15 in group B, 6/13 in group L, 8/15 in group S and 2/15 in group C did not require any analgesic during the first 48 hours ($p<0.02$). Abdominal pain, nausea and vomiting were similar in all groups.

DISCUSSION: Scapular pain was significantly reduced by intraperitoneal (subdiaphragmatic area) lidocaine or bupivacaine. Duration of pain relief was longer than expected. Since this method is simple, non invasive and clinically safe, it may represent an interesting alternative to improve postoperative comfort after daycase laparoscopy.





TITLE: ORAL EFFERVESCENT CIMETIDINE IN DAYCASE ANESTHESIA: EFFECTS ON GASTRIC pH AND VOLUME.

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INTRODUCTION: Risk factors for gastric regurgitation (pH <2.5 and volume> 25 ml) are frequently encountered in outpatients (1). In addition, overnight fasting does not guarantee either an empty stomach or a safe pH (2). The aim of this study was to evaluate the effects of oral effervescent cimetidine 200 mg (EC), a new form containing 0.3M sodium citrate on both gastric pH and volume in outpatients scheduled for laparoscopy.

MATERIAL AND METHODS: After institutional approval, informed consent was obtained from 80 ASA-1 young women scheduled for ambulatory laparoscopy. During the preoperative visit, these patients were randomly divided in four equal groups of 20 patients each, according to the type of oral premedication: group A: hydroxyzine 100 mg , group B: hydroxyzine 100 mg and EC, group C: EC and group D cimetidine 400 mg. Patients of all groups received these drugs p.o. in 30 ml of water, either 90 min (groups A, B and D) or 5 min (group C) before induction of general anesthesia (thiopentone,vecuronium,fentanyl). Following intubation, a gastric tube was inserted and 3 ml of gastric juice were removed to measure pH and optical density. Phenol red was then injected through the gastric tube and diluted into the stomach. A 10-15 ml sample was withdrawn to measure the residual gastric volume (RGV) by the dilution indicator technique. RGV results are expressed as mean±SD and compared using ANOVA while pH values are compared using Chi square test with Yates correction when appropriate.

RESULTS: Patients were similar with respect to age, weight, height and physical status. 12 patients were excluded because of impossible gastric tube insertion and 7 patients because of bile containing gastric fluid. Mean RGV values are shown in table 1 and were significantly higher in group C patients when compared to groups B and D ($p<0,05$). pH results are shown in figure 1: all patients in group C had a significant increase in pH (pH≥ 5) whereas 13/14 patients in group A , 1/14 in group B, 2/15 in group D had a pH ≤ 2.5 (groupC: $p<0,05$ vs group B, D and A).

DISCUSSION: Considering 1/ that oral EC given immediately before anesthetic induction increases gastric pH in a significant and reliable manner, 2/ that the threshold of RGV at risk in humans is still controversial (3), oral EC given just before general anesthesia is an easy and efficient alternative to reduce the risks of inhalation of gastric contents.

REFERENCES: 1/-Ong BY et al: Can Anaesth Soc J (1978), 25: 36. 2/-Sutherland AD et al: Br J Anaesth (1986), 58: 876. 3/-Hardy JF: Can J Anaesth (1988), 35:162.

MEAN RESIDUAL GASTRIC VOLUMES

	GR A	GR B	GR C	GR D
RGV (ml)	12 ± 6	17 ± 25	30 ± 23	16 ± 11