TITLE: THE EFFECT OF FAMOTIDINE ON GASTRIC ACIDITY AND VOLUME IN AMUBLATORY SURGERY PATIENTS

AUTHORS: Y. James Kao, M.D., Lowry P. Schaub, M.D., Juan M. Tellez, M.D.
AFFILIATION: Anesthesiology Dept., Texas Tech University HSC, Lubbock, TX 79430

Anesthesia for ambulatory surgery has become a significant part of anesthesia practice. These patients present a unique set of problems, for example, the compliance with fasting instructions. Therefore, regurgitation and aspiration become a more conspicuous consideration. Famotidine is a new H-2 receptor antagonist with high potency and long duration of activity. Here we report the effect of famotidine orally and intravenously on the acidity and volume of gastric content in outpatients.

With the approval of TTUHSC Institution Review Board, 35 ASA status I or II, ambulatory surgical patients were randomly assigned into three groups according to their hospital number. Fourteen patients in group I received famotidine 40 mg orally and 9 patients in group II received famotidine 20 mg intravenously upon their arrival in the outpatient clinic. All patients received famotidine at least 30 minutes prior to induction. Twelve patients in group III served as controls. After intravenous induction and endotracheal intubation, a nasogastric sump tube was inserted orally. The positioning of the tube was verified acoustically and gastric contents collected under reduced pressure. The acidity and the volume of the samples were determined. The results were analyzed using the analysis of variance and the Duncan test (table).

The mean gastric volume of group I (14.9 cc) and group II (15.5 cc) were not significantly different ($p=0.5423$). The mean gastric volume of group III (28.3 cc) was found to be significantly different from both group I ($p=0.0091$) and group II ($p=0.0239$). The mean gastric pH of group I (6.16) and group II (5.86) were not significantly different ($p=0.6144$). Mean gastric pH of group III (3.23) was found to be significantly different from both group I ($p=0.0001$) and group II ($p=0.0022$).

Despite intense debate, most anesthesiologists consider gastric content pH of less than 2.5 and volume of more than 25 ml to be critical.[1] Our results show that in outpatient surgery setting, famotidine given either orally or intravenously, reduces the risk of aspiration pneumonitis.

Reference
1. Cote CJ et al. Anesthesiology 56:70-72, 1982

Table. Mean pH Value and Volume of Gastric Content

		pH	Volume
Group I	(P.O.)	6.16*	14.9 cc*
Group II	(I.V.)	5.86*	15.5 cc*
Group III	(Control)	3.23	28.3 cc

*Statistically significant with $p<0.05$ when compared to control (Group III).

A48

TITLE: BACK PAIN FOLLOWING CHLOROPROCAINE EPIDURAL ANESTHESIA

Authors: JM Hynson, M.D., DI Sessler, M.D., B Glosten, M.D.*, and J McGuire
Affiliation: Departments of Anesthesia, University of California, San Francisco, California and *University of Chicago, Chicago, Illinois

We recently observed severe back pain in volunteers given epidural chloroprocaine during a study of thermoregulation. Volunteers given epidural lidocaine or saline in previous, similar studies recovered without pain.

Following IRB approval, 19 volunteers participated in studies of shivering during epidural anesthesia. In each volunteer, an epidural catheter was placed at the L3-4 interspace; chloroprocaine was not used for local infiltration. Volunteers were carefully positioned on a padded operating table. In the first study, 4 volunteers were each given three, 80-ml boluses of saline (2 cold and 1 warm) at 2-h intervals. In the second study, 10 volunteers were given two, 30-ml injections of 1% lidocaine, (1 cold and 1 warm), separated by 3-h. In the third study, 5 volunteers were given an initial bolus of 30-50 ml of 3% chloroprocaine, followed by additional 10-ml boluses at 10-min intervals until the sensory blockade reached the T5 dermatome.

One volunteer in the lidocaine group experienced moderate, aching back pain, lasting 24 h. None of the volunteers given lidocaine or saline experienced severe back pain. In contrast, four of the volunteers given chloroprocaine experienced severe back pain when the sensory block resolved. Pain was localized to the lumbar region, and was spasmodic in quality. Pain continued for the rest of the day and evening in three volunteers. Each described it as the most severe pain he had experienced.

Although this study was retrospective, our results are not confounded by other medications (*e.g.*, narcotics) or pain from surgical procedures. Furthermore, all volunteers were comfortably positioned and the control groups were well matched. These data suggest that large volumes of chloroprocaine cause back pain.

Table

Group	Pain/n	Wt(kg)	Ht(cm)	Bolus(ml)	Total(ml)
Saline	0/4	58±4	164±5	80	240
1% Lido	1/10	64±10	164±8	30	60
3% CP	4/5	75±11	177±9	38±8	56±8

Supported by NIH grant #R29 GM39723.