TITLE: THIAMYLAL REQUIREMENTS FOR INDUCTION OF ANESTHESIA IN UNPREMEDICATED ADOLESCENTS

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Introduction: Anesthesia induction with ultra-short-acting barbiturates displays wide variation in response among patients as well as different age groups.[1,2] Although many clinicians describe higher milligram per kilogram dose requirements for adolescents than for children or young adults, previous studies[3,4] do not support this observation. This study attempted to delineate any differences in thiamylal requirements in this age group that may be related to their pubertal development or increased stress response.
Methods: With institutional approval and parental and patient consent, 89 ASA I unpremedicated patients 11-17 years old (mean = 13.6) who underwent minor surgery on an ambulatory basis were studied. Patients were randomly assigned a thiamylal doses of 4, 5, or 6 mg/kg for induction of anesthesia. Forty seconds following thiamylal bolus, a second anesthesiologist blinded to the dose evaluated patients for loss of eye lash reflex (sleep) and subsequent mask acceptance. Induction was considered to be successful when both maneuvers did not result in patient movement. The Tanner staging system was used to determine degree of sexual maturation, and the heart rate and blood pressure changes from baseline and the Manifest Upset Scale scores were used to assess degree of anxiety.
Results: The results are presented in the following tables.

Table 1. Dose response for induction with thiamylal

Thiamylal Dose	Loss of Eyelash Reflex (sleep)	Sleep and Mask Acceptance (successful induction)
4	58.6%	55.2%
5	82.8%	79.3%
6	90.3%	87.1%
	Chi square = 9.319 $p < .05$	Chi square = 8.56 $p < .05$

Table 2. Responses observed (for all doses)

Tanner	Loss of Eyelash Reflex (sleep)	Sleep and Mask Acceptance (successful induction)
I-II	78.6%	75.0%
III	85.0%	75.0%
IV-V	73.2%	73.2%

No significant differences in dose response were found between patients from all 5 Tanner stages, nor between patients displaying variable levels of stress on induction.
Discussion: Compared to previous reports,[3,4] our findings show a higher dose requirement for induction with thiamylal in adolescents, especially when successful induction is defined by both loss of lid reflex and mask acceptance. This may be attributable to differences in their physiologic and/or psychologic state.
References:

1. Br J Anaesth 26:164-173, 1954
2. Dan Med Bull 36:281-298, 1989
3. Anesthesiology 55:703-705, 1981
4. Anesthesiology 67:104-107, 1987

TITLE: RANITIDINE REDUCES NAUSEA AND VOMITING AFTER THIOPENTAL-ISOFLURANE ANESTHESIA

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Postoperative nausea and vomiting (N+V) remain the most common anesthesia related side effect in out-patient surgery. Ranitidine 150 mg orally the night before surgery and 2-3 hours prior to surgery and gastric suctioning (GS) at the termination of surgery reduce N+V to 4% when compared to the untreated (45%). Mean discharge time was reduced by 22% in the untreated group. We show here that larger doses of ranitidine (RAN) and GS are an effective antiemetic regimen which lead more patients to "street fitness" in a shorter period of time.
Method
Institutional approval and informed consent were obtained. Fifty adult female patients undergoing outpatient laparoscopy received RAN 300 mg orally the night before surgery and 300 mg 2-3 hours prior to surgery. GS was performed at the end of surgery. The anesthetic and recovery regimen were previously reported.[1]
Results
Table 1 demonstrates the data which is compared to the previously untreated control and the RAN 150 mg treatment group.[1] RAN 300 mg shortened the mean discharge time from the control but not the 150 mg RAN group (ANOVA). The incidence of N+V was reduced to 4% with 300 mg RAN compared to control, but not 150 mg RAN treatment (Chi square). Table 2 depicts the number of patients discharged at the arbitrarily chosen time of 120 mintues or less. Thirty-four percent of patients treated with 300 mg RAN were discharged in less than 120 minutes (Chi square).
Discussion
Emptying the stomach of its contents by physical and chemical means markedly reduces the incidence of N+V postoperatively. RAN 300 mg and GS effectively decreases the incidence of N+V as well as decreasing the time it takes a patient to become "street fit." RAN and GS should be considered as an effective means to eliminate nausea and vomiting.
References

1. Anesthesia Analgesia 70(2S): S218, 1990.

Table 1

Group	MEAN ± SEM	% N+V	
RAN 300 mg[1]	145.7 ± 5.1*	4*	*-significant from Control but not one another (0.05)
RAN 150 mg[1]	139.5 ± 6.5*	4*	
Control[1]	178.2 ± 8.4	45	

Table 2

Group	Discharge (%)	
RAN 300 mg[1]	34*	*-significantly different 0.05 level
RAN 150 mg[1]	27	
Control[1]	9	