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Title : PREOPERATIVE ATROPINE AND EMERGENCE DELIRIUM

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Introduction. A delirious patient emerging from general anesthesia can be a management problem to recovery room personnel and create a hazard to themselves by self injury or by compromising the operative results. While the etiology of postanesthetic delirium is largely unknown, several factors have been implicated as possible etiologies. Among the most commonly proposed inciting drugs are the anticholinergic drugs, scopolamine and atropine.[1-3] It has recently been postulated that anticholinergic premedication drugs suppress acetylcholine activity in the brain of anesthetized patients and that physostigmine reduces delirium by restoring acetylcholine activity.[4] The present study was designed to test the hypothesis that atropine is a probable causative factor in the development of postanesthetic delirium.

Methods. Patients studied were all ASA Physical Status 1 or 2, scheduled for oral surgery. One group of 72 patients received no premedication drugs and a second group of 91 patients received atropine, 0.4 mg IM approximately 30 minutes before induction of anesthesia. All patients were induced with thiopental and received succinylcholine to facilitate tracheal intubation. General anesthesia was maintained with enflurane, nitrous oxide and oxygen. After surgery was concluded the patients were sent to recovery room and observed until fully alert. A patient was judged delirious when he was restless, thrashing about, in danger of self injury and requiring restraint. Treatment of delirium was 1.0 mg of physostigmine IV. No other treatment measures were necessary.

Results. All patients with postanesthetic delirium received physostigmine and all responded staisfactorily within a few minutes. They no longer required restraint and were able to engage in meaningful conversation.

	Atropine Pre-operatively (N=91)	No Atropine Pre-operatively (N=72)
Age (yrs)($\bar{x}$±S.E.)	17.5 ± 0.4	20.2 ± 0.6
Developed delirium	3(3.3%)	1(1.4%)

Delirium development in the two groups was not significantly different ($P > 0.1$).

Discussion. In the past 12 months, 41% of all patients developing postanesthetic delirium in our recovery room, had undergone an oral surgical procedure. We selected oral surgery patients for our study because of this high potential for delirium. Since there was no significant difference in the incidence of delirium in our two study groups, we suspect that atropine is unlikely to be a principle etiology of this delirium.

References.

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2. Lapan D: Arizona Medicine 34:159, 1973
3. Greene L: Anesth Analg 50:222, 1971
4. Savage G: Plastic Reconstructive Surgery 62:81, 1978