

Title : THE USE OF OPIATES IN PAEDIATRIC OUTPATIENT ANAESTHESIA
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INTRODUCTION. The ideal management of paediatric patients undergoing outpatient anaesthesia remains a contentious issue. Following reports that many patients were vomiting after leaving hospital, the exact incidence was initially defined and then the effect of omitting an opiate (Papavretum, a preformulated mixture of morphine and other opioids) from the premedication was investigated. Patients undergoing circumcision were used as a model with analgesia provided by caudal extradural block.

METHOD. 129 children over the age of 2 years undergoing circumcision under anaesthesia were studied. Group 1 (n = 64) patients received a standard premedication of Papavretum 0.3 mg/kg and atropine 0.02 mg/kg I.M. one hour before operation. Anaesthesia was induced with thiopentone I.V. or by inhalation with halothane or cyclopropane (as determined by the particular anaesthesiologist's preference) and maintained with nitrous oxide 66%, oxygen 33%, and halothane with patients breathing spontaneously. All patients received a caudal extradural injection of 0.25% bupivacaine at a dose of 1 ml/yr. Each patient was visited by a nurse on the day following surgery and inquiry made to determine incidence of postoperative vomiting. In Group 2 (n = 65), Papavretum was omitted from the premedication; no other portion of the method was altered. Statistical analysis was performed using Chi square test (with Yates correction) and Students t-test for paired data as appropriate.

RESULTS. There was no statistical difference in the make up of the groups. Group 1 had a mean age of 5.5 yrs (S.D. 2.86); mean age in Group 2 was 5.17 yrs (S.D. 2.71). The relative use of induction agents was the same in both groups as shown in Table 1.

Table 1. USE OF INDUCTION AGENTS

AGENT	GROUP 1	GROUP 2
Cyclopropane	11	12
Halothane	13	14
Thiopentone	40	39

The incidence of vomiting in Group 1 subjects receiving Papavretum was 56%, while in Group 2 with Papavretum omitted the incidence was only 15%. The difference is highly significant ($p < 0.0001$), Table 2.

Table 2. INCIDENCE OF VOMITING

	GROUP 1	GROUP 2
Vomitters	36	10
Nonvomitters	28	55

DISCUSSION. This study clearly implicates Papavretum as a principle cause of vomiting after discharge from hospital following outpatient anaesthesia. The use of different induction agents will not have affected the result as their relative use in the two groups was identical. Patients undergoing circumcision were chosen as a model, as a uniformly short anaesthetic time and adequate postoperative analgesia allowed by caudal bupivacaine minimize other potential causes of vomiting. Postoperative vomiting in paediatric patients following outpatient anaesthesia is more common than in adults^{1,2} and if persistent is more likely to lead to complications such as dehydration, particularly in the small infant. Although the incidence of vomiting with opiates may be acceptably low if the patient is kept recumbent, the frequency has been shown to greatly increase when the patient becomes ambulant (probably due to sensitization of the labyrinthine system to movement, which has been shown to occur with morphine³); thus, as occurred in this study, many patients will not vomit until after discharge from hospital. The use of opiates and other narcotic analgesics should be avoided whenever possible in paediatric patients undergoing outpatient anaesthesia and other methods of postoperative analgesia employed.

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