

IV MORPHINE OR IM CODEINE FOR POST CRANIOTOMY ANALGESIA

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INTRODUCTION: There has been controversy regarding how much pain is experienced and what is the best analgesic for patients following a craniotomy. The aim of this study was to document the severity of pain and compare effectiveness and side effects of intravenous (IV) morphine to our current standard, intramuscular (IM) codeine.

METHODS: With IRB approval and informed consent, 29 patients undergoing craniotomy for supratentorial pathology were randomized to receive either IV morphine (max 5mg) with codeine rescue, or 30-60mg IM codeine with morphine rescue if they requested analgesia in the first postoperative hour in PACU. A standard anesthetic including fentanyl, remifentanyl and granisetron was used. Dose of analgesia given, verbal pain scores (0=no pain, 10 =worst pain possible), nausea and vomiting, sedation and neurological deficits were recorded for 48 hours postoperatively and compared between the 2 groups using statistical methods.

RESULTS: Mean (+/-SD) age was 54 (+/-13)yrs, weight 72(+/-15)kg, and 66% of patients were female. Only 17 (59%) patients received some analgesia in the first hour (8 codeine, 9 morphine). Rescue medication was required in 6 patients (75%) receiving morphine and 2 (22%) receiving codeine. During the next 47 hr 8 (28%) more patients received codeine, while 4 (14%) had no opiate analgesia. Mean dose of opiate given (codeine dose converted to morphine equivalents where 12mg codeine = 1mg morphine¹) in 24 hours was 11 mg of morphine (range 0-35mg). There was a wide distribution of pain scores at all times (fig). 17 (59%) patients had nausea and 15 (52%) vomited. There was no statistical difference between those who had morphine or codeine in the first hour with respect to pain, total dose of opiate given over 24 hours, if rescue analgesia was needed, nausea, vomiting or sedation.

DISCUSSION: We found a wide variation in pain and opiate requirements post craniotomy. Incidence of PONV was high. No difference in the effectiveness or side effects between morphine and codeine was demonstrated, but a larger study is needed to confirm this.

REFERENCE: 1. Canadian Pharmaceutical Association. CPS 2002. p 1209

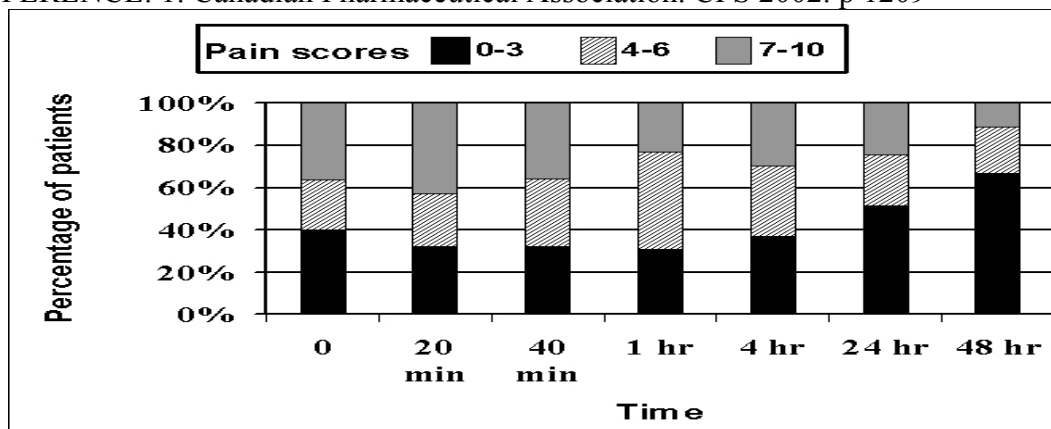


Figure: Distribution of pain scores by time.