MORPHINE AS AN ALTERNATIVE TO CODEINE AFTER ENT SURGERY: EVALUATION OF SAFETY AND EFFICACY

Andrew Wignell,1 Mee Kuan Chen,2 David Kendall3.1Pharmacy Department, Nottingham University Hospitals NHS Trust; 2School of Pharmacy, University of Nottingham; 3Faculty of Medicine & Health Sciences, University of Nottingham

Introduction Codeine has long been considered the weak opioid of choice in children and was frequently used to treat pain after tonsillectomy and adenotonsillectomy. However, in 2013 the Medicines and Healthcare Products Regulatory Agency (MHRA) stated codeine to be contraindicated in children aged less than 12 years and in those younger than 18 years who have undergone tonsillectomy and/or adenoidectomy for obstructive sleep apnoea. Other weak opioids are not considered suitable alternatives, so low-dose oral morphine is often now used instead. Some concerns have been expressed about increased use of strong opioids in the paediatric population. This study aimed to determine the opioid requirements of patients who had undergone ear, nose and throat (ENT) procedures and assess the efficacy and safety of a 200 microgram/kg dose of oral morphine given every 4 hours as needed when given alongside regular non-opioid analgesics.

Methods Parents of children under the age of 16 who were to undergo planned tonsillectomy, adenoidectomy or adenotonsillectomy were approached to participate. If consent was given, they were asked to record pain scores, sickness scores and doses of analgesics administered for seven days postoperatively. Parents were also asked to report any constipation or nausea experienced by the child. A follow-up telephone call was conducted to obtain the recorded data from parents.

Results 37 paediatric patients (21 adenotonsillectomy; 4 adenoidectomy; 12 tonsillectomy) participated in the study; age range 2–16 years (mean 6.4). Mean pain intensity scores (using a numerical rating scale) were highest on the second postoperative day for each of the surgical procedures: 8.4/10 for tonsillectomy, 7.1/10 for adenotonsillectomy and 5.5/10 for adenoidectomy. Tonsillectomy patients experienced more severe pain throughout the postoperative period as compared to adenotonsillectomy or adenoidectomy patients and on the final day of observation mean pain scores were 3.4, 2.1 and 1/10 respectively. Four (10.8%) patients had pain scoring 6/10 or greater on the 7th post-operative day.

Patients all received paracetamol and ibuprofen for the full 7 days post-operatively. Tonsillectomy patients needed more doses of morphine than those who had undergone adenotonsillectomy; none of the adenoidectomy patients required morphine to relieve pain. Use of morphine reduced as their mean pain scores decreased over time. One (2.7%) patient sought additional medical help for analgesia.

Unwanted effects were observed in 13 (35.1%) patients: constipation (six patients), drowsiness (four patients), mild nausea (two patients) and vomiting (one patient). One patient sought additional medical help for morphine-related side effects. Mean parent satisfaction score recorded was 8/10.

Conclusion Pain following tonsillectomy and adenotonsillectomy was significant and not controlled by paracetamol and ibuprofen alone. Morphine was a safe and effective alternative to codeine.