

APPROPRIATENESS AND EFFECTIVENESS OF FIRST-LINE ANALGESICS IN CHILDREN WITH HEADACHE ADMITTED TO THE PEDIATRIC EMERGENCY DEPARTMENT

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Background. Headache in children is a common reason for referring to the Pediatric Emergency Department (PED). Timely analgesic treatment is essential to achieve better outcomes; pain must be first appropriately and systematically assessed using validated scales. The main aim of this study was to evaluate the appropriateness and effectiveness of analgesics given for headache by caregivers before admission to the PED and by healthcare professionals in the PED. Second, we evaluated the use of validated pain scales by healthcare professionals at triage, on clinical evaluation, and on discharge.

Methods. Single-center, retrospective observational study on a representative sample of children <18 years-old admitted with non-traumatic headache to our tertiary PED between January and December 2024. Data from electronic medical records included demographics, headache type, analgesic use at home and in the PED, dosing accuracy, pain scale administration, pain response to treatment, and clinical outcomes. Descriptive analysis is reported.

Results. A total of 152 patients were included (median age 10 years; range 8-13 years). Analgesics were given at home to 112 of patients (73.7%): 77 (50.7%) received acetaminophen, 28 (18.4%) ibuprofen and 7 (4.6%) ketoprofen. Older children were significantly more likely to receive treatment at home (p=0.024). Acetanomiphen and ibuprofen were underdosed in 11.2% of children, with no difference between the two medications; ketoprofen was always given at the right dosage. In the PED, 90 children (60.5%) received analgesics at triage and showed greater reduction of pain scores compared to untreated patients (p<0.001). Pain assessment scales were used in 80.3% of patients at triage, 63.2% on medical evaluation, and 20.4% at discharge. Pain was never assessed using appropriate and validated scales in the PED in 11 children (7.2%).

Conclusions. Early analgesic treatment is essential to reduce effectively headache in children. Although significant progress has been made achieved on pain assessment, measurement and management in the recent years, there is still considerable room for improvement. Enhancing parental education on the proper management of headache at home including the correct choice of medication, the right timing of administration and the appropriate dosage represents a crucial objective for all healthcare professionals involved in pediatric care.