A RANDOMIZED CONTROLLED TRIAL OF ORAL ANALGESIC UTILIZATION FOR PAIN MANAGEMENT OF CHILDHOOD MUSCULOSKELETAL INJURIES IN THE EMERGENCY DEPARTMENT (THE OUCH TRIAL)

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INTRODUCTION / AIM

Musculoskeletal injury (MSK-I) in children is very common and pain is poorly treated. This study will assess the efficacy of a combination of oral morphine and ibuprofen for pain management of children with MSK-I in the ED.

METHODS

A randomized, double-blind, placebo-controlled, multi-centered, three-arm, clinical trial of 500 patients was conducted at three pediatric EDs. Patients 6-17 y.o. who presented to the ED with a MSK-I and a score >30 mm on the 100mm Visual Analogue Scale were eligible. Patients were randomized (in a 2:1:1 ratio) to receive orally: morphine (0.2mg/kg) + ibuprofen (10mg/kg) (group MOR + IBU) or morphine (0.2 mg/kg) + placebo (group MOR) or ibuprofen (10mg/kg) + placebo (group IBU). Primary outcome was pain intensity score <30 mm at 60-minutes (T-60) after treatment administration.

RESULTS

456 patients were included in analyses: 177 (MOR + IBU), 188 (MOR), 91 (IBU). Baseline characteristics were similar in the 3 groups. Only 30% (MOR + IBU), 29% (MOR) and 30% (IBU) of patients reached a pain score <30 mm at T-60 (p=0.83). Mean pain scores at T-60 were 42.3 + 23.2 mm (MOR + IBU), 43.8 + 23.1 mm (MOR) and 42.3 + 23.3 mm (IBU) (p=0.83). No severe adverse events were observed.

DISCUSSION / CONCLUSIONS

Combination of morphine with ibuprofen did not provide any additional pain relief for children with MSK injuries. None of the study medication provided optimal pain management.

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