Postoperative Pain Management: Efficacy of Caudal Tramadol in Pediatric Lower Abdominal Surgery: A Randomized Clinical Study

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Abstract : Background: One of the methods of pain control after pediatric surgical procedures is regional techniques, including caudal block, despite their limitations. Objectives: In this study, the pain score and complications of caudal tramadol were evaluated in pediatrics following lower abdom- inal surgery. Methods: In this study, 46 children aged 3 to 10 years were allocated into two equal groups (R and TR) for performing caudal anal- gesia after lower abdominal surgery. The injectate contained 0.2% ropivacaine 1 mL/kg in the R group (control group) and tramadol (2 mg/kg) and ropivacaine in the TR group. The pain score, duration of pain relief, amount of paracetamol consumption, hemody- namic alterations, and possible complications at specific times (1, 2, and 6 hours) were evaluated in both groups. Results: No considerable difference was observed in the pain score between the groups in the first and second hours (P > 0.05). However, in the sixth hour, the TR group had a significantly lower pain score than the R group (P < 0.05). Compared to the R group, the TR group had a longer period of analgesia and lower consumption of analgesic drugs (P < 0.05). Heart rate and blood pressure differences were not significant between the two groups (P > 0.05). Similarly, the duration of operation and recovery time were not remarkably different between the two groups (P > 0.05). Complications had no apparent differences between these two groups, as well (P > 0.05). Conclusions: In this study, the addition of tramadol to caudal ropivacaine in pediatric lower abdominal surgery promoted pain relief without complications.