

Evaluation of Intraoperative and Postoperative Metrics After Preoperative Administration of Ketorolac for Analgesia in Acute Appendicitis

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INTRODUCTION: Emergency Departments (ED) have set goals to reduce the use of opiate analgesics to honor opioid stewardship. Ketorolac is a potent analgesic with a well-defined safety profile and multiple routes of administration making it a versatile medication for moderate-severe acute pain management. In regards to the use of ketorolac for appendectomy, data is limited.

OBJECTIVE: This study aims to determine if perioperative ketorolac administration in patients diagnosed with acute appendicitis undergoing surgical intervention is associated with operative and post-operative bleeding or wound complications.

METHODS: The cohort included patients aged > 5 years diagnosed with acute appendicitis undergoing appendectomy with a disposition to the operating room (OR) directly from the ED from February 1, 2013, to December 31, 2020. Individual patient demographic information, past medical history, preoperative data were included. Individual patient demographic information, past medical history, preoperative data were included. Outcomes measured were duration of operation, estimated blood loss > 250 mL, description of operative bleeding control, hemoglobin drop > 3 g/d/L, hemoperitoneum, bleeding requiring re-exploration, postoperative need for blood transfusion, and surgical site infection.

RESULTS: Data were analyzed using standard Chi-square and Fisher's t-test; there was no significant difference in operative or postoperative bleeding events, nor surgical site infections in patients who received ketorolac preoperatively. Notably, estimated blood loss, hemoperitoneum, and re-exploration were near identical in both groups

CONCLUSIONS: Preoperative administration of ketorolac for acute appendicitis was not associated with increased bleeding complications. Further, patients with comorbidities known to cause bleeding complications such as diabetes mellitus and tobacco consumption, did not show any adverse bleeding events after receiving perioperative ketorolac.