

A Meta-analysis of Postoperative Bleeding with the use of Toradol

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Abstract

Background: Postoperative pain control is essential in obtaining optimal patient outcomes.¹ Opioid pain medications are often used for postoperative pain control despite side effects, which limit the effectiveness of these medications. Toradol, a non-steroidal anti-inflammatory, is an attractive alternative for achieving pain control postoperatively; however, concerns over postoperative bleeding have limited its use in clinical practice.

Methods: A PubMed search was performed using the keywords Toradol and bleeding. Identified studies were reviewed for the incidence of adverse events and the efficacy of pain control. A meta-analysis was then performed to determine if postoperative bleeding was increased with Toradol compared to controls. The Student's t-test was used to calculate differences between Toradol and control groups.

Results: 18 studies involving a total of 1321 patients were analyzed. Mean age in the Toradol group was 40.6 years compared to 41.7 years in the control group. Postoperative bleeding occurred in 17 of 712 patients (2.4%) in the Toradol group compared to 6 of 609 patients (1.0%) in the control group ($P > 0.05$). Adverse events were similar between both groups (19.1% vs. 22.8%, $P > 0.05$). Pain control outcomes were reported in 9 studies. Pain control was superior with Toradol compared to controls in 4 studies, inferior in 2 studies, and equivalent in 3 studies.

Conclusions: Surgeon concerns of increased postoperative bleeding with the use of Toradol are based mostly on isolated case reports.^{2,3} This report is the first meta-analysis of randomized controlled trials examining if there is increased postoperative bleeding with Toradol. In this study postoperative bleeding was not significantly increased with Toradol compared to controls, nor was the overall incidence of adverse events. Pain control, however, was more often found to be superior with Toradol. Toradol should be considered for postoperative pain control, especially to limit the use of opioid pain medications.

References

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