

## Efficacy Of Tranexamic Acid On Blood Loss After Primary Total Hip Replacement : A Case-control Study In 154 Patients

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**Abstract :** Introduction: Perioperative blood loss is a frequent cause of complications in total hip replacement (THR). The present prospective study assessed the efficacy of tranexamic acid (Exacyl(®)) in reducing blood loss in primary THR. Hypothesis: Tranexamic acid reduces blood loss in THR. Material and method: -This is a prospective randomized study on the effectiveness of Exacyl (tranexamic acid) in total hip replacement surgery performed on a standardized technique between 2019 and September 2022. -It involved 154 patients, of which 84 received a single injection of Exacyl (group 1) at a dosage of 10 mg/kg over 20 minutes during the perioperative period. -All patients received postoperative thromboprophylaxis with enoxaparin 0.4 ml subcutaneously. -All patients were admitted to the post-interventional intensive care unit for a duration of 24 hours for monitoring and pain management as per the service protocol. Results: 154 patients, of which 84 received a single injection of Exacyl (group 1) and 70 patients patients who did not receive Exacyl perioperatively : (Group 2 ) The average age is 57 +/- 15 years The distribution by gender was nearly equal with 56% male and 44% female; "The distribution according to the ASA score was as follows: 20.2% ASA1, 82.3% ASA2, and 17.5% ASA3. "There was a significant difference in the average volume of intraoperative and postoperative bleeding during the 48 hours." The average bleeding volume for group 1 (received Exacyl) was 614 ml +/- 228, while the average bleeding volume for group 2 was 729 +/- 300, with a chi-square test of 6.35 and a p-value < 0.01, which is highly significant. The ANOVA test showed an F-statistic of 7.11 and a p-value of 0.008. A Bartlett test revealed a chi-square of 6.35 and a p-value < 0.01." "In Group 1 (patients who received Exacyl), 73% had bleeding less than 750 ml (Group A), and 26% had bleeding exceeding 750 ml (Group B). In Group 2 (patients who did not receive Exacyl perioperatively), 52% had bleeding less than 750 ml (Group A), and 47% had bleeding exceeding 750 ml (Group B). "Thus, the use of Exacyl reduced perioperative bleeding and specifically decreased the risk of severe bleeding exceeding 750 ml by 43% with a relative risk (RR) of 1.37 and a p-value < 0.01. The transfusion rate was 1.19% in the population of Group 1 (Exacyl), whereas it was 10% in the population of Group 2 (no Exacyl). It can be stated that the use of Exacyl resulted in a reduction in perioperative blood transfusion with an RR of 0.1 and a p-value of 0.02. Conclusions: The use of Exacyl significantly reduced perioperative bleeding in this type of surgery.

**Keywords :** acid tranexamic, blood loss, anesthesia, total hip replacement, surgery

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