

## Tranexamic Acid in Orthopedic Surgery in Children

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**Abstract :** Orthopedic surgery is a provider of pre and postoperative bleeding; patients are exposed to several risks, and different measures are proposed to reduce bleeding during surgery, called the transfusion-sparing method, including tranexamic acid, which has shown its effectiveness in numerous studies. A prospective analytical study in 50 children was carried out in the orthopedic traumatology operating room of the EL HAROUCHI hospital of the CHU IBN ROCHD in Casablanca over a period of six months (April to October 2022). Two groups were randomized: one receiving tranexamic acid (Group A) and a non-receiving control group (Group B). The average age was 10.3 years, of which 58.8% were female. The first type of surgery was thoracolumbar scoliosis (52%). The average preoperative hemoglobin was 12.28 g/dl in group A, against 12.67 g/dl in the control group. There was no significant difference between the two groups ( $p=0.148$ ). Mean intraoperative bleeding was 396.29 ml in group A versus 412 ml in the control group. No significant difference was observed for this parameter ( $p=0.632$ ). The average hemoglobin level in the immediate postoperative period in our patients is 10.2 g/dl. In group A, it was 10.95 g/dl versus 10.93 g/dl in group B. At H24 postoperative, the mean hemoglobin value was 10.29 g/dl in group A against 9.5 g/dl in group B. For group A, the blood loss recorded during the first 24 hours was 209.43 ml, against 372 ml in group B, with a significant difference between the two groups ( $p=0.001$ ). There is no statistically significant difference between the 2 groups in terms of the use of fillers, ephedrine or intraoperative transfusion. While for postoperative transfusion, we note the existence of a statistically significant difference between group A and group B. It is suggested that the use of tranexamic acid is an effective, simple, and low-cost way to limit postoperative blood loss and the need for transfusion.

**Keywords :** tranexamic acid, blood loss, orthopedic surgery, children

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