

"Efficacy of oral tranexamic acid in spinal surgery".

Introduction: Tranexamic acid (TXA) is an antifibrinolytic synthetic derivative of lysine, it competitively inhibits the conversion of plasminogen to plasmin, preventing the degradation of fibrin and the dissolution of the clots formed, reaches therapeutic levels in serum at 2 hours post-oral administration, staying up to 6 hours, intravenous administration reaches them faster but lasts 5 hours.

TXA was approved by the Food and Drug Administration to reduce bleeding in hemophiliac patients undergoing dental extraction, in 2011 the World Health Organization added it to the list of essential drugs.

In recent years, the effectiveness of TXA has been demonstrated to reduce intraoperative bleeding and the need for transfusion associated with it. In spinal surgery, studies focused on deformity correction surgeries. The reports of transoperative bleeding in Mexico for idiopathic scoliosis are 1146 cc (350 - 4500 cc) with instrumented levels of 10.88 on average (4-15 levels).

Objective: To determine the total bleeding volume with the use of oral tranexamic acid after surgical treatment of the spine.

Methodology: A prospective, routine clinical practice study. A sample size of 30 patients. Universe of the sample, patients who are candidates for major spinal surgery admitted to the spine surgery service. Patients who are candidates for major surgery with a control hemoglobin (Hb) > 12 mg/dl will receive a dose of tranexamic acid of 1950 mg orally 2 hours before the surgical incision.

During the surgery, the anesthesiologist will quantify the bleeding in a conventional way, at the end of the procedure a ¼ drain will be placed to quantify the residual bleeding. The information on bleeding, transfusions performed, Hb control 24 hours after surgery will be collected, the record will be made in an excel sheet (see 16.30) for statistical analysis.

Expected results: Oral TXA reduces intraoperative bleeding in patients undergoing major spinal surgery. According to Yu et al, patients treated with oral as well as intravenous tranexamic acid experience the same amount of intraoperative bleeding after spinal fusion surgery.

Conclusion: At our headquarters, 391 surgical procedures are performed per year, of these 3.8% (15 patients) are surgeries of more than 4 levels with average bleeding of 367.5 cc of bleeding.