

The effectiveness of a small dosage of tranexamic acid on perioperative loss of blood during a posterior spinal fusion



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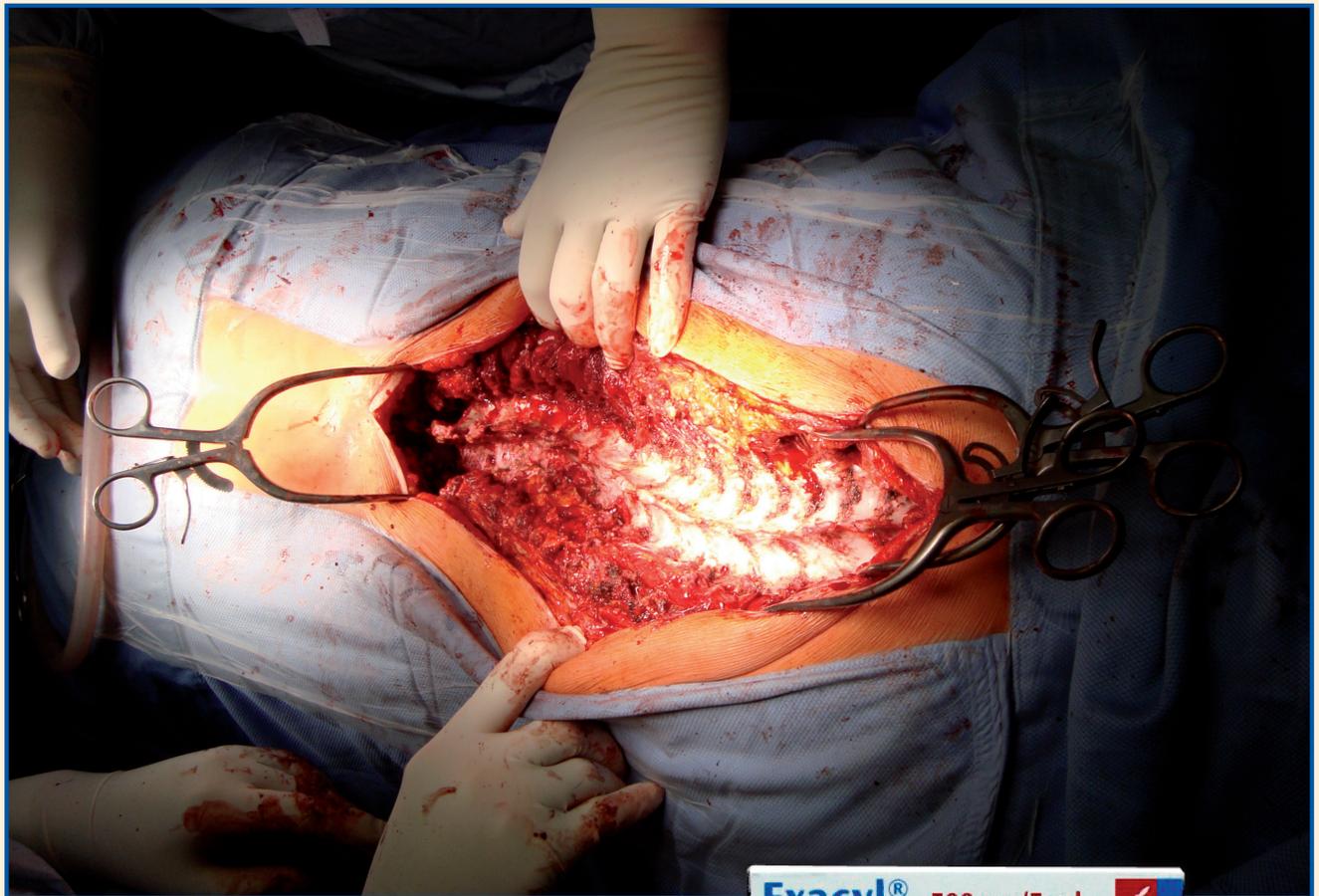
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Introduction: The aim was to investigate, retrospectively, if a small dosage of tranexamic acid (TA) reduces the loss of blood during a posterior spinal fusion.

Methods: The retrospective study consists of 62 patients, 49 women and 13 men, who underwent a spinal fusion in thoracolumbal scope with the diagnosis of idiopathic scoliosis. All of them were treated by the same surgical team, put into anesthesia by means of TIVA (midazolam, sufentanil), a controlled hypotension has been reached (65-70 torr MAP) and a cell saver was used. Half of the patients were intravenously administered tranexamic acid in the dosage of 10 mg/kg/body weight and then continually in the dosage of 1 mg/kg/body weight till the end of the procedure. The second half of the patients were put into anesthesia by the same means, the tranexamic acid was not, however, used.

The blood loss was measured by the cell saver and by weighing the surgical masks. The weight was subsequently raised by one quarter. The values of blood loss were then statistically compared by means of Student's T-test for independent variables. The value of $p < 0,05$ was assessed as statistically relevant.



Results: The blood loss of the patients who underwent the given procedure with TA was $812, 75 \pm 43$ ml, the value of those without TA equalled $1285, 45 \pm 56$ ml. The difference is statistically important for $p < 0,008$. The use of an antifibrinolytic did not result in any complications.



Conclusion: The use of TA during similar procedures lowers the perioperative loss of blood because, primary, it contributes to hemostasis. TA, together with considerate perioperative technique, positioning, minor hypotension and the use of cell saver lowers the amount of allogenic transfusions. Moreover, in the current state of affairs that does not favour the use of aprotinin as an antifibrinolytic, the use of TA presents a cheap and safe method.

References:

Elwatidy, S., et al: Efficacy and safety of prophylactic large dose of Tranexamic Acid in spine surgery. *Spine*, 23, 2008, N.24, p.2577-2580