TITLE: TOPICAL TRANEXAMIC ACID FOR BLEEDING OF ENDOSCOPIC SINUS SURGERY

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INTRODUCTION : Tranexamic acid(TA) is an antifibrinolytic agent to reduce bleeding following some surgical procedures(1,2,3) . It applied topically to achieve homeostasis(4) . We exmained the effect of topical tranexamic acid for providing a bloodless surgical field in patients undergoing endoscopic sinus surgery.We also evaluated the bleeding volume and grading under controlled hypotension .

METHODS: A prospective, randomized , double blind clinical trial was performed in 56 patients scheduled for elective endoscopic sinus surgery under general anesthesia. Twenty - six patients received topical tranextamic acid (1000 mg) during surgery and 30 patients received placebo (control group) . The hemodynamic endpoint of the anesthetic management was maintenance of hypotension at 30 Percent lower than preoperative MAP for producing a bloodless surgical field . The desired control of the cardiovascular system was attained with halothane (inspired concentration increments of 0.5 vol % up to a maximum of 1.5 vol %) ± hydralazine (100 μ g/kg IV to a maximum of 40 mg) as needed . Intraoperative bleeding was assessed on a six – point scale from 0 = no bleeding to 5 = severe bleeding .

RESULTS : There was less bleeding volume in the tranexamic acid group than in the placebo group (174 ± 10 vs 229 ± 23 ml , $P<0.05$) . Frequency of score 3 (troublesome with repeated suction) was lower in the tranexamic acid group than in the placebo group (% 26 vs % 70 , $P< 0.05$) There was a significant difference in bleeding score between two groups (2.3 ± 0.2 in TA vs 2.5 ± 0/15 in placebo group , $P=0.00$) .

DISCUSSION: Topical tranexamic acid provides more clear surgical field during endoscopic sinus surgery under general anesthesia with halothane and controlled hypotension . Also, it may be benefit in reducing bleeding from surgical wounds while minimizing systemic toxicity and thromboembolism than may occur with intravenous administration.

REFERENCES:

1)Acta orthop scand . 2001; 72(5) : 442-48 .
2) Ann thorac surg . 2001; 72(5) : 470-75 .
3) Lancet .1991; 337:431.
4)Anesthesia , 2000; 55:600.