Review Article

Topical Tranexamic Acid in Reconstructive Surgery: A Narrative Review

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Abstract

Tranexamic acid reduces bleeding in many surgical settings. Topical application may provide similar benefits with fewer systemic effects. This narrative review summarizes the mechanism, clinical evidence and practical considerations of topical tranexamic acid in reconstructive surgery. (Fictional content for template demonstration.)

Keywords: tranexamic acid; hemostasis; reconstructive surgery; review

Introduction

Bleeding and hematoma remain common complications after reconstructive procedures.[1,2] Systemic tranexamic acid is effective but raises concerns in patients with thrombotic risk.[3]

Mechanism of Action

Tranexamic acid blocks lysine binding sites on plasminogen and thereby inhibits fibrinolysis (Fig. 1).[4] Applied topically, high local concentrations can be achieved with minimal plasma levels.[5–7]

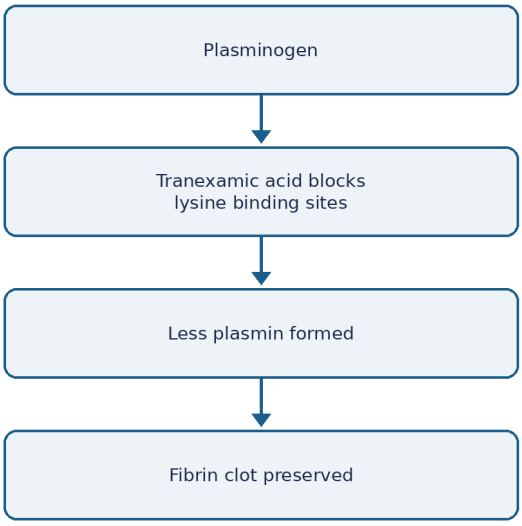


Fig. 1. Mechanism of action of tranexamic acid (schematic).

Clinical Evidence

Randomized trials in breast and body contouring surgery reported reduced drain output and hematoma rates.[6,8] A standard textbook chapter describes typical dosing.[9]

Conclusion

Topical tranexamic acid is a simple and inexpensive adjunct for hemostasis in reconstructive surgery, although optimal dosing remains uncertain.[10]

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