

## **Use of tranexamic acid to reduce bleeding in burns surgery.**

Tana Y, Chapman T, Brooks P: J Plast Reconstr Aesthet Surg. 2012 May; 65(5):684-6.

We describe, for the first time, the use of topical tranexamic acid as an adjunct to traditional methods in the control of bleeding in burns surgery.

We illustrate our use with a case example and continue to discuss the reasons we believe it is a useful, effective and safe means of achieving haemostasis.

## **What is the evidence for tranexamic acid in burns?**

Walsh K, Nikkhah D, Dheansa B. Burns. 2014 Aug;40(5):1055-7. doi: 10.1016/j.burns.2014.04.015. Epub 2014 May 14.

## **Reducing Postburn Injury Anemia in a Jehovah's Witness Patient**

Barsun A, Sen S, Palmieri TL, Greenhalgh DG: J Burn Care Res. 2013 Oct 11

### **Abstract**

Anemia is a complication of severe burn injury. Burn patients who refuse blood transfusions, such as Jehovah's Witnesses, present difficult challenges, and treatment paradigms need to be altered to reduce blood loss and increase red cell restoration. In this report the authors present a case of a 36-year-old Jehovah's Witness who suffered a 35% TBSA burn injury. In addition to standard burn injury treatment, the authors attempted to reduce blood loss with a combination of intraoperative (tranexamic acid) and perioperative (erythropoietin, intravenous iron) strategies.

## **Effect of Tranexamic Acid on Blood Loss in Burn Surgery: A Preliminary Study.**

Jennes, S. MD; Degrave, E. MD; Despiegeleer, X.; Grenez, O: Journal of Burn Care & Rehabilitation. March/April 2003 – Vol 24 – issue – ppg S59.

### 33. Effect of Tranexamic Acid on Blood Loss in Burn Surgery: A Preliminary Study

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**Introduction** Burn surgery is complicated by blood loss. Tranexamic acid (TA), a synthetic inhibitor of fibrinolysis, diminishes the bleeding in a wide variety of surgery. As far as we know, its use in burn surgery has never been reported before. **Methods** We performed a prospective, randomized and double-blind study on the effect of tranexamic acid on blood loss in 27 tangential burn excisions. Tranexamic acid, 20 mg/kg body weight, or placebo (PL), was given intravenously just before the operation. Blood loss during the operation and 24h postoperatively was calculated by four calculation methods: Warden (W), Warden and Dagher (W-D), Gross (G) and Gross and Dagher (G-D). The non parametric test of Mann-Whitney was used for statistical analysis.  $P < 0.05$  was considered significant. **Results** The two groups were demographically similar. The surgical characteristics (duration of surgery, postburn day, excision surface, donor sites) were also similar for the two groups. The calculated blood losses were reduced in the TA group as showed in table I. The CBL with Warden at the end of surgery were also diminished in the TA group 1.03 against 1.62 ml/cm<sup>2</sup> in the PL group ( $p = 0.09$ ). No patient showed signs of deep venous thrombosis (DVT). **Conclusion** These results are encouraging. Tranexamic acid could be a cheap, safe and effective technique to reduce blood loss in tangential burn excision. Further studies are necessary to confirm these results and to exclude complications like the occurrence of DVT.

Table I. Calculated blood loss 24 hours postoperatively.

	PL Group (ml/cm <sup>2</sup> )		TA Group (ml/cm <sup>2</sup> )		P
	Mean	SE	Mean	SE	
CBL with W	1,88	0,39	1,02	0,31	0,02
CBL with W-D	1,81	0,40	1,10	0,31	0,05
CBL with G	1,63	0,33	0,96	0,21	0,07
CBL with G-D	1,60	0,33	0,95	0,21	0,07

Mean; SE : standard error.

CBL : calculated blood loss; PL : placebo; TA : tranexamic acid.