

Royal Flying Doctor Service Queensland

Draft protocol for use of tranexamic acid in trauma patients in the prehospital setting

Version 1.1

Dated Monday 3rd October 2012

Author : Dr Minh Le Cong, RFDS Cairns base

Overview :

Tranexamic acid is an antifibrinolytic agent in common use for treatment of a variety of bleeding disorders. Recent randomised controlled evidence indicates a significant mortality benefit in the administration of tranexamic acid to trauma patients with significant haemorrhage or considered at risk of such within 8hrs of injury. Subset analysis of this research demonstrated the greatest benefit is within the first 3 hrs of injury. Therefore there is a useful role for prehospital and retrieval services to have the capacity to administer tranexamic acid to trauma patients.

Indications:

All trauma patients, appearing to be at least 16 years old, with ongoing significant haemorrhage (systolic blood pressure less than 90 mmHg and/or heart rate more than 110 beats per minute), or who are considered to be at risk of significant haemorrhage, and are within 3 hours of the injury.

Relative Contra-Indications (subject to physician judgement):

Evidence of disseminated intravascular coagulation

Past history of thrombotic disorder such as deep venous thrombosis or pulmonary embolus

Known thrombophilia

Treatment

Each treatment pack contains:

- 4 x 500 mg ampoules of Tranexamic Acid
- 1 x 100mL bag of 0.9% NaCl (for use with loading dose)

Treatment	Ampoules	Dose (Tranexamic acid)	Infusion rate
Loading	2	1 gram	100 mL over 10 minutes
Maintenance	2	1 gram	120 mg/hr [60 ml/hr] for about 8 hours

References:

1. The CRASH-2 Collaborators. Effects of tranexamic acid on death,vascular occlusive events, and blood transfusion in trauma patients with significant haemorrhage (CRASH-2): a randomised,placebo-controlled trial. *Lancet* 2010; **376**: 23–32.
2. Roberts I, Shakur H, Ker K, Coats T, for the CRASH-2 Trial collaborators. Antifibrinolytic drugs for acute traumatic injury. *Cochrane Database Syst Rev* 2011; **1**: CD004896
3. The CRASH-2 Collaborators. The importance of early treatment with tranexamic acid in bleeding trauma patients: an exploratory analysis of the CRASH-2 randomised controlled trial. *Lancet* 2011; Published **Online** March 24, 2011DOI:10.1016/S0140-6736(11)60278-X
4. CRASH -2 study protocol,viewed at http://www.crash2.lshtm.ac.uk/prot_EngStudydesign.htm on Monday 3rd October 2011.