

Paediatrics: Tranexamic acid (paediatric trauma)

Reference No: MONO-PAEDS/519/23

Presentation:	Tranexamic acid 100mg/ml solution for injection 5ml ampoules																													
Indication:	<p>Tranexamic acid is an antifibrinolytic that prevents or reduces bleeding by impairing fibrin dissolution. Early administration (preferably in first 3 hours) is vital for efficacy. The dosing schedule is recommended in BNFC, RCPCH and NPPG for the management of 'haemorrhage following major trauma'.</p> <p>Advanced Paediatric Life Support (APLS) guidance advises tranexamic acid is used for haemorrhage following major trauma, but this is unlicensed.</p> <p>Please see BNFC for dosing schedules for other indications.</p>																													
Dose:	<p>Loading dose:</p> <ul style="list-style-type: none"> 15mg/kg (maximum 1g) over 10 minutes <p>Maintenance dose:</p> <ul style="list-style-type: none"> 2mg/kg/hour (maximum 1g per dose) Infuse for at least 8 hours or until bleeding stops 																													
Route of administration:	Slow IV injection (over 10 minutes) followed by IV infusion																													
Instructions for preparation:	<p>Loading dose: dilute to convenient volume with sodium chloride 0.9% or glucose 5% and infuse over 10 minutes.</p> <p>Maintenance dose: add 500mg to 500ml sodium chloride 0.9% or glucose 5% (to give a 1mg/mL concentration) and infuse at 2ml/kg/hour.</p>																													
Prescribing	<p><u>QHB</u> prescribe on MediTech <u>RDH</u> Loading dose to be prescribed on EPMA (Lorenzo) or on the 'STAT dose' section on the paper chart. Maintenance doses to be prescribed on the paper chart:</p> <p>The concentration of the maintenance infusion is 1mg/mL i.e. 500mg/500mL Example prescription for 12 kg infant:</p> <table border="1"> <thead> <tr> <th>Drug</th> <th>Drug amount in bag</th> <th>Diluent</th> <th colspan="2">Total volume (ml)</th> <th>Route</th> </tr> </thead> <tbody> <tr> <td><i>Tranexamic acid</i></td> <td><i>500mg</i></td> <td><i>Sodium Chloride 0.9%</i></td> <td colspan="2"><i>500ml</i></td> <td><i>IV</i></td> </tr> <tr> <th>Start date</th> <th>Drug concentration per ml</th> <th>Infusion range</th> <th>Min</th> <th>Max</th> <th>Name, Sig, Bleep</th> </tr> <tr> <td><i>2/8/19</i></td> <td rowspan="2"><i>1mg/ml</i></td> <td>Dose/kg/time</td> <td><i>2mg/kg/hour</i></td> <td><i>2mg/kg/hour</i></td> <td><i>A.Doctor</i></td> </tr> <tr> <td>Pharm</td> <td>ml/hr</td> <td><i>24mg/hr</i></td> <td><i>24mg/hr</i></td> <td><i>#1234</i></td> </tr> </tbody> </table>	Drug	Drug amount in bag	Diluent	Total volume (ml)		Route	<i>Tranexamic acid</i>	<i>500mg</i>	<i>Sodium Chloride 0.9%</i>	<i>500ml</i>		<i>IV</i>	Start date	Drug concentration per ml	Infusion range	Min	Max	Name, Sig, Bleep	<i>2/8/19</i>	<i>1mg/ml</i>	Dose/kg/time	<i>2mg/kg/hour</i>	<i>2mg/kg/hour</i>	<i>A.Doctor</i>	Pharm	ml/hr	<i>24mg/hr</i>	<i>24mg/hr</i>	<i>#1234</i>
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Known compatibility issues	Do not infuse with any other drugs.																													
Additional Comments:	Suggested monitoring: can cause hypersensitivity reactions including anaphylaxis. Rapid IV injection may cause malaise and hypotension.																													

	<p>Contra-indications: fibrinolytic conditions following disseminated intravascular coagulation (unless predominant activation of fibrinolytic system with severe bleeding); history of convulsions; thromboembolic disease.</p> <p>Note: Injection not licensed for use in children under 1 year or for administration by intravenous infusion</p>

Note: The contents of this monograph should be read in conjunction with information available in the BNFC and Medusa

References:

Royal College of Paediatrics and Child Health Evidence Statement: Major trauma and the use of tranexamic acid in children. November 2012. Accessed via:

https://www.medusaimg.nhs.uk/docs/RPCHTXA%20evidence%20statement_final%20v2.pdf Accessed 30/11/23

British National Formulary for Children, accessed via www.medicinescomplete.com on 30/11/23

Medusa Paediatric Injectable Medicines Guide, accessed via <https://medusa.wales.nhs.uk/IVGuideDisplay.asp> 15.6.23

Document control sheet

GUIDELINE NUMBER	MONO-PAEDS/519/23
AREA IN WHICH THIS MONOGRAPH APPLIES	Paediatrics - CED

DIVISIONAL AUTHORISATION	
GROUP	DATE
Paediatric monograph review group	12/12/2023

AUTHORS		
Author	Position	Date
Written by:	K.Thomson (original guideline)	9.4.13

If review:

	Position	Date
Reviewed by:	Joanna Hurcombe Advanced Pharmacist, E&T and Women's and Children's	November 2023
Checked by:	Lamia Ahmed Advanced Pharmacist- Womens and Childrens	December 2023

Change history:

Changes Reference	Change details	Date
1	Reviewed, transferred to new monograph template, references updated and minor changes made.	31.7.19
2	Changed wording in indication section as now dosing is published in the BNFC.	December 2023
3	Removal of 'subsequent bags made from pharmacy' due to changes in pharmacy service and addition of concentration of maintenance product added	December 2023