

**UNIVERSITY HOSPITALS OF DERBY & BURTON NHS FOUNDATION TRUST –  
DERBY SITE ONLY  
DRUG MONOGRAPH FOR USE IN RADIOLOGY, RDH**

**Alteplase (rt-PA) – For intra-arterial use**

<b>Indications</b>	<ul style="list-style-type: none"> <li>• Intra-arterial thrombolysis             <ul style="list-style-type: none"> <li>○ As per Clinical Guideline for the use of intra-arterial thrombolysis</li> </ul> </li> </ul>
<b>Dose</b>	<p>Loading dose (Radiologist): 2.5mg – 5mg</p> <p>Maintenance infusion: 0.5 – 1 mg/hour administered through the arterial catheter</p>
<b>Preparation</b>	<ol style="list-style-type: none"> <li>1. Dissolve 20mg alteplase in the 20ml diluent (water for injection) provided to give a 1mg/ml solution</li> <li>2. <b>BOLUS:</b> Draw up 5mg in 5ml into a 10ml syringe and label this ready for the bolus.</li> <li>3. <b>INFUSION</b> Using a 50ml luer-lock syringe, withdraw 10ml (10mg) from the reconstituted alteplase vial. Then make the syringe up to 50ml total volume using sodium chloride 0.9%. <b>This provides 10mg in 50ml (0.2mg/ml) solution</b></li> </ol>
<b>Administration</b>	<p><b>BOLUS:</b> The bolus dose should be administered by the radiologist.</p> <p><b>INFUSION</b> via arterial catheter:</p> <ul style="list-style-type: none"> <li>• Obtain a Syramed syringe pump</li> <li>• Load and confirm the infusion syringe</li> <li>• Go to the CCU/ICU directory and locate '<b>X-Ray - Alteplase</b>'.</li> <li>• Ensure the infusion rate matches the prescription (this will default to 0.5mg/hour and so may require adjustment for patients commencing on 1ml/hour)</li> <li>• Perform final pump checks and commence infusion.</li> </ul>
<b>Shelf-life</b>	24 hours (Store in a refrigerator if not used immediately)

<b>Additional information</b>	<p>Patients must be transferred to SDU/HDU or ICU only.</p> <p>The patient will return to X-ray intermittently for further angiography to check progress and possibly reposition the infusion catheter. If the alteplase is to continue following angiography, check there is sufficient volume and expiry left on the infusion to continue until the next angiography. Prepare further infusions in X-ray if required as the HDU/ICU areas are less familiar with this route/indication.</p> <p>The alteplase is usually administered concurrently with IV or IA heparin (see Guidelines for intra-arterial thrombolysis. Heparin regimen may differ from standard ward based IV heparin anticoagulation)</p>																				
<b>Sample Label</b>	<table border="1" style="width: 100%; background-color: #ffff00;"> <thead> <tr> <th colspan="4" style="text-align: center;">DRUGS ADDED TO THIS INFUSION</th> </tr> </thead> <tbody> <tr> <td colspan="3"> <b>PATIENT</b>  <i>A. Patient (A. Number)</i> </td> <td> <b>WARD</b>  <i>X-ray</i> </td> </tr> <tr> <td> <b>DRUG</b>  <i>Alteplase in 50ml Sodium Chloride 0.9%</i> </td> <td> <b>AMOUNT</b>  <i>10mg (0.2mg/ml)</i> </td> <td> <b>ADDED BY</b> </td> <td> <b>CHECKED BY</b> </td> </tr> <tr> <td> <b>DATE ADDED</b>  <b>TIME ADDED</b> </td> <td> <b>EXP.DATE</b>  <b>EXP.TIME</b> </td> <td colspan="2"> <b>BATCH NUMBER</b> </td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>DISCONTINUE IF CLOUDINESS OR PRECIPITATE DEVELOPS</b></td> </tr> </tbody> </table>	DRUGS ADDED TO THIS INFUSION				<b>PATIENT</b> <i>A. Patient (A. Number)</i>			<b>WARD</b> <i>X-ray</i>	<b>DRUG</b> <i>Alteplase in 50ml Sodium Chloride 0.9%</i>	<b>AMOUNT</b> <i>10mg (0.2mg/ml)</i>	<b>ADDED BY</b>	<b>CHECKED BY</b>	<b>DATE ADDED</b> <b>TIME ADDED</b>	<b>EXP.DATE</b> <b>EXP.TIME</b>	<b>BATCH NUMBER</b>		<b>DISCONTINUE IF CLOUDINESS OR PRECIPITATE DEVELOPS</b>			
DRUGS ADDED TO THIS INFUSION																					
<b>PATIENT</b> <i>A. Patient (A. Number)</i>			<b>WARD</b> <i>X-ray</i>																		
<b>DRUG</b> <i>Alteplase in 50ml Sodium Chloride 0.9%</i>	<b>AMOUNT</b> <i>10mg (0.2mg/ml)</i>	<b>ADDED BY</b>	<b>CHECKED BY</b>																		
<b>DATE ADDED</b> <b>TIME ADDED</b>	<b>EXP.DATE</b> <b>EXP.TIME</b>	<b>BATCH NUMBER</b>																			
<b>DISCONTINUE IF CLOUDINESS OR PRECIPITATE DEVELOPS</b>																					

**Documentation Controls**

Development of Guideline:	Pharmacist – Medicines Safety & Clinical Governance
Consultation with:	Consultant Radiologist Radiology Sister Critical Care Pharmacist
Approved By:	Interventional Radiology - September 2018 C, D & CS Division - 15/11/2018
Review Date:	October 2022
Key contact:	Medicines Safety Officer

**References**

RDH Guidelines for the use of alteplase in intra-arterial thrombolysis. Access via <https://derby.koha-ptfs.co.uk/cgi-bin/koha/opac-main.pl>

RDH Pharmacy Aseptic Unit worksheet. ALTEPLASE (TPA) 10mg in 50ml PRE-FILLED SYRINGE (INTRA-ARTERIAL INFUSION). ALTE02 version Number: 07.05

\*\*\* End of Monograph \*\*\*