

## Care pathway for Catheter Directed Thrombolysis (CDT) of Iliofemoral deep vein thrombosis (DVT)

**CRITERIA: Initiate for patients with Severe iliofemoral DVT at risk of post phlebitic syndrome being considered for CATHETER DIRECTED THROMBOLYSIS**

date initiated: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

date onset of symptoms: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Addressograph or  
Name  
DoB  
Address  
Unit number CHI

*INSTRUCTIONS Insert information into appropriate spaces as required. Do not sign until actually done!*

*This ICP is an immediate action checklist & a clinical record, & also requires a Prescription Administration Chart & SEWS chart*

**PHASE 1** – Immediate patient assessment indicates that this patient has the symptoms suggestive of acute iliofemoral DVT

**CONTRA INDICATIONS** *Circle Yes, No or Not known as appropriate*

Exclusion criteria	Yes	No	Unknown
• Contraindications to thrombolytic treatment, including bleeding diathesis	Yes	No	Unknown
• Severe anaemia (haemoglobin <80 g/L)	Yes	No	Unknown
• Thrombocytopenia (platelets <80×10 <sup>9</sup> /L)	Yes	No	Unknown
• Severe renal failure (estimated creatinine clearance <30 mL/min)	Yes	No	Unknown
• Severe hypertension > 160 mm Hg (or diastolic blood > 100 mm Hg)	Yes	No	Unknown
• Pregnancy or thrombosis within 7 days postpartum	Yes	No	Unknown
• Less than 14 days postsurgery or post-trauma	Yes	No	Unknown
• History of subarachnoid or intracerebral bleeding	Yes	No	Unknown
• Disease with life expectancy less than 24 months	Yes	No	Unknown
• Absolute contraindications to thrombolysis	Yes	No	Unknown
• Malignant disease needing chemotherapy	Yes	No	Unknown

*If there are any circles in the 'Yes' column, please discuss urgently with Interventional Radiology Consultant*

<b>Title:</b> CDT of iliofemoral DVT	
<b>ID:</b> CDT_of_ Iliofemoral_ DVT_1.12.15	<b>Lead Author:</b> Dr Christopher Hay <b>Co Authors:</b> Fiona Dickson
<b>Category:</b> 1	<b>Document Version;</b> 1
<b>Status Draft/Final:</b> Final	<b>Review Date:</b> 19.11.16
<b>Authoriser;</b> e.g. Formulary Committee & D & T	<b>Date Authorisation:</b> 19.11.15
<b>Date added to intranet</b>	1/12/15

**CONDITIONS** *Circle Y or N as appropriate*

• Age 18–75 years	<b>Yes</b>	<b>No</b>
• Onset of symptoms within the past 14 days	<b>Yes</b>	<b>No</b>
• Iliofemoral DVT objectively verified (by diagnostic imaging) by Consultant Radiologist	<b>Yes</b>	<b>No</b>
• Evidence of adverse prognosis	<b>Yes</b>	<b>No</b>

**CONCLUSION of CONTRAINDICATIONS & CONDITIONS: Is patient to receive Thrombolysis?**

**Y N**

Signed  
date

print  
time

designation

**If YES**, proceed to administer Thrombolysis as per the protocol and continue overleaf.  
**If NO**, discontinue this document & continue with non invasive management.

Alteplase- Delivery of thrombolysis

**PRESCRIBING**

- ALTEPLASE (rtPa) MUST BE PRESCRIBED ON THE REGULAR SECTION OF THE Prescription Administration Chart: initial + date when done \_\_\_\_\_
- Prescribed only by radiology consultant or HDU consultant

*Example of prescribing for Prescription Administration Chart*

*Alteplase 0.2mg/ml in NaCl 0.9%, 20mg in 100mls infused at xmls/hr*

## DOSING

- Patients weight (kg):
- Extremes of weight calculate Ideal Body Weight (IBW):
- Dosing = 0.01mg/kg/hr (Maximum dose of 20mg/24 hours)
- Alteplase dose per hour =                      mg/hr      (wt (kg) x 0.01 = xmg/hr)
- Length of infusion will vary from 15 – 18 hours or as directed by Consultant Interventional Radiologist.
- Duration of infusion:                                      initial                                      date

## ADMINISTRATION

- For drug preparation and administration please refer to <http://intranet.lothian.scot.nhs.uk/NHSLothian/Healthcare/A-Z/CriticalCare/DrugsA-Z/>
- Given as continuous infusion at:                      ml/hr initial
- Alteplase is administered directly into the thrombus via the side hole infusion catheter placed in Interventional Radiology.
- The alteplase infusion will be connected by the Interventional Radiology consultant responsible for the case.
- Unfractionated heparin infusion via the side arm of the 6F popliteal venous sheath for the duration of the thrombolysis thence by peripheral cannula until stated by Interventional Radiologist/clinical team: as per Lothian Heparin infusion chart: [http://intranet.lothian.scot.nhs.uk/NHSLothian/Healthcare/A-Z/EmergencyDepartment-RIE/Pharmacology/Heparin InfusionChart.pdf](http://intranet.lothian.scot.nhs.uk/NHSLothian/Healthcare/A-Z/EmergencyDepartment-RIE/Pharmacology/Heparin%20InfusionChart.pdf) to achieve a therapeutic APTT ration (2-3).

## ADDITIONAL THROMBOMECHANICAL / ULTRASOUND LIQUEFACTION TECHNIQUES:

- If ultrasound augmented thrombolysis is to continue additional ultrasound generator and infusion of saline (cooling agent) will accompany the patient.

### **Observations and notes**

- The patient is to be nursed in bed for the duration of the treatment.
- The patient may be sat up to 45° at most for the duration of the procedure.
- During infusion, patients should have high dependency monitoring by nursing staff until check angiography (15-18 hours after initiation) using a SEWS chart [special nursing should be requested]
- Observations to be recorded on the SEWS chart are to include inspection of the popliteal sheath site and peripheral pulses. These should be recorded half hourly for the first 5 hours and then hourly until the termination of the procedure.
- Infusion volume to be recorded hourly

### **In the first 24 hours, the following treatments should be avoided**

- Urinary catheterization
- NG insertion
- Central venous access
- Arterial puncture
- Aspirin
- For the duration of the rtPA infusion intramuscular injections and anticoagulant therapy [Heparin & LMWH] are to be avoided.

### **Termination of procedure**

- Arrange for check pulmonary angiogram after 15-18hrs of CDT on the next available list
- Wherever possible, this should be arranged in advance with Interventional Radiology (ex 23788). Check venogram will be carried out in the IR suite on the morning list the day after instigation of treatment. Where successful the thrombolysis will be stopped and the patient may return to a level 1 bed with systemic heparinisation alone.

### **MANAGEMENT OF MOST COMMON COMPLICATIONS:**

- If complications such as puncture site haematoma/haemorrhage are encountered then clinical review should be sought from the on call Vascular or HDU registrar.
- If suspicion of intra-cerebral/visceral haemorrhage/hypotension or shock is raised then infusions should be ceased, coagulation status and full blood count taken, volume replacement started pending further investigation as to source of haemorrhage.