

STROKE THROMBOLYSIS*Patient Sticker*

Potential thrombolysis case
identified from Stroke Pathway



Organise immediate
CT head scan



Confirm CT head report and
check for contraindications



Arrange for direct admission to
acute stroke ward

- Confirm onset time < 4.5 hours
- Check BM > 3.5 mmol/L
- Confirm no contraindications

- Until 8pm call **Stroke Co-ordinator on 07769 932 342**
- After 8pm call **Neurology SpR or Stroke Consultant**
- Do not wait for scan to be completed before calling
- Aim is a door-to-needle time of 60 minutes

- Obtain venous access
- Administer alteplase as per thrombolysis guideline
- Total dose: 0.9mg/kg (10% as bolus and 90% over 1 hour)
- Begin 15 minute observations
- Maintain NBM until dysphasia screening test
- Nurse at 30 degrees

Patients receiving alteplase must be directly admitted to the stroke unit to a monitored bed
First dose of aspirin 300mg is withheld until after a repeat CT head scan taken 24 hours post-lysis

Observations including pulse, BP, respiratory rate, oxygen saturations and GCS should occur:

- Every 15 min for 2 hours, then;
- Every 30 minutes for 6 hours, then;
- Every 60 minutes for 16 hours

In the event of significant hypertension (systolic BP > 180 mmHg or a diastolic BP > 105 mmHg) or neurological deterioration contact the stroke team immediately

THROMBOLYSIS ASSESSMENT

A&E TEAM DUTIES ON ARRIVAL OF PATIENT	TICK
1. ONSET < 4.5 HRS IMMEDIATELY CALL STROKE CO-ORDINATOR / STROKE DOCTOR	[]
2. ORGANISE IMMEDIATE CT SCAN	[]
3. Check capillary blood sugar (BM) <input style="width: 50px;" type="text"/> mmol / L	[]
4. Begin routine observations every 15 minutes	[]
5. Rapid evaluation to rule out acute MI, aortic dissection, or non-stroke aetiology	[]
6. Administer oxygen at 2-10 litres/minute to maintain SpO2 >= 95%	[]
7. Place two 18 gauge cannula in large veins, preferably in both antecubital fossa	[]
8. Take 20mls of blood for urgent FBC, U&E, GLUCOSE, CHOLESTEROL, INR, G&S	[]
9. Obtain 12-lead ECG	[]
10. Maintain NBM (including medication) until Dysphagia screening test passed	[]
11. Do not insert NG tube or urinary catheter	[]
Name: _____ Signature: _____ Designation: _____	

STROKE TEAM DUTIES WITHIN 30 MINUTES	TICK
1. Examine patient and confirm diagnosis	[]
2. Discuss risks / benefits with the patient / relative and obtain consent	[]
3. Review and confirm all inclusion / exclusion criteria	[]
4. Complete NIHSS and Rankin scores. NIHSS: <input style="width: 50px;" type="text"/> Rankin: <input style="width: 50px;" type="text"/>	[]
5. Weigh patient or estimate weight if not able to weigh	[]
6. Review all blood results if available	[]
7. Prepare to travel with patient to CT (alteplase, portable monitors, oxygen, giving set and infusion equipment)	[]
Name: _____ Signature: _____ Designation: _____	

MEDICAL TEAM DUTIES WITHIN 1 HOUR OF ARRIVAL			TICK
1.	Obtain CT scan and review images		[]
2.	Final confirmation that inclusion / exclusion criteria are met		[]
3.	Confirm consent obtained if possible		[]
4.	Calculate dose of alteplase from weight and administer as per the protocol		[]
5.	Admit patient to a monitored bed on the ACUTE STROKE WARD (411)		[]
Name:	Signature:	Designation:	

MEDICAL & NURSING TEAM DUTIES POST THROMBOLYSIS
<ul style="list-style-type: none"> Once infusion begins, monitor pulse, BP, respiratory rate, oxygen saturations and GCS <ul style="list-style-type: none"> Every 15 min for 2 hours, then; Every 30 minutes for 6 hours, then; Every 60 minutes for 16 hours Notify medical team immediately if SBP\geq175 and/or DBP\geq 100 Check that the dose of alteplase and time administered are clearly recorded Complete medical clerking and enter onto PICS Record NIHSS at 2 hours and 24 hours Repeat NIHSS earlier if patient condition has changed significantly Strict control of blood pressure for 24 hours Continuous pulse oximetry, oxygen by nasal cannula or mask to maintain O2 sat > 95% Paracetamol 1g every 4 hours (max 4g/24hour) if T > 38; consider cooling for T > 40 No antiplatelet agents or anticoagulants (including heparin for DVT prophylaxis) for 24 hours Restrict patient intake to strict NBM including medications until dysphagia screen passed No aspirin, clopidogrel or dipyridamole for the next 24 hours No urinary catheter, NG tubes, arterial or central venous lines for 24 hrs unless essential Admit to Ward 411 only, following transfer protocols to create a bed if one needed

THROMBOLYSIS CRITERIA

ELIGIBILITY CRITERIA:

Should be checked **YES** to proceed

	YES	NO
Clinical diagnosis of ischaemic stroke	<input type="checkbox"/>	<input type="checkbox"/>
Onset of symptoms within 4.5 hours	<input type="checkbox"/>	<input type="checkbox"/>
Stroke symptoms present for at least 30 minutes	<input type="checkbox"/>	<input type="checkbox"/>

CONTRAINDICATIONS:

Should be checked **NO** to proceed¹

	YES	NO
Evidence of intracranial haemorrhage on CT scan	<input type="checkbox"/>	<input type="checkbox"/>
Severe stroke as assessed clinically (e.g. NIHSS>25)	<input type="checkbox"/>	<input type="checkbox"/>
Symptoms suggestive of subarachnoid haemorrhage	<input type="checkbox"/>	<input type="checkbox"/>
Seizure at onset of stroke	<input type="checkbox"/>	<input type="checkbox"/>
Administration of any form of anticoagulant (except warfarin if INR<1.4)	<input type="checkbox"/>	<input type="checkbox"/>
Platelet count of below 100,000/mm ³ (no need to wait for result unless suspected to be low)	<input type="checkbox"/>	<input type="checkbox"/>
Systolic BP consistently >185 mmHg or diastolic BP >110 mmHg	<input type="checkbox"/>	<input type="checkbox"/>
Blood glucose <3 or > 20 mmol/l	<input type="checkbox"/>	<input type="checkbox"/>
Known haemorrhagic diathesis	<input type="checkbox"/>	<input type="checkbox"/>
Recent severe or dangerous bleeding	<input type="checkbox"/>	<input type="checkbox"/>
Any history of other central nervous system damage (i.e. malignancy / surgery)	<input type="checkbox"/>	<input type="checkbox"/>
Haemorrhagic retinopathy	<input type="checkbox"/>	<input type="checkbox"/>
Recent (<10 days) traumatic CPR or childbirth	<input type="checkbox"/>	<input type="checkbox"/>
Recent puncture (<1 week) of a non-compressible blood vessel (or lumbar puncture)	<input type="checkbox"/>	<input type="checkbox"/>
Bacterial endocarditis, pericarditis or acute pancreatitis	<input type="checkbox"/>	<input type="checkbox"/>
Neoplasm with increased bleeding risk	<input type="checkbox"/>	<input type="checkbox"/>
Any severe liver disease	<input type="checkbox"/>	<input type="checkbox"/>
Known history of intracranial haemorrhage	<input type="checkbox"/>	<input type="checkbox"/>
History of prior stroke and concomitant diabetes	<input type="checkbox"/>	<input type="checkbox"/>
Prior stroke or head injury within the last 3 months	<input type="checkbox"/>	<input type="checkbox"/>
Ulcerative/bleeding GI disease during the last 3 months	<input type="checkbox"/>	<input type="checkbox"/>
Major surgery or significant trauma in past 3 months	<input type="checkbox"/>	<input type="checkbox"/>

WARNINGS:

Should *usually* be checked **NO** to proceed²

	YES	NO
Age >80 years AND onset between 3 hours and 4.5 hours	<input type="checkbox"/>	<input type="checkbox"/>
Symptoms very mild (NIHSS<4) or improving before thrombolysis	<input type="checkbox"/>	<input type="checkbox"/>
Significant pre-morbid dependency / frailty (Rankin score 3 or more)	<input type="checkbox"/>	<input type="checkbox"/>
Severe stroke as assessed on CT scan (>1/3 MCA territory or ASPECT score <7)	<input type="checkbox"/>	<input type="checkbox"/>

¹ Patients with **CONTRAINDICATIONS** are unlikely to be suitable except following discussion with the stroke consultant and a careful assessment of risks and benefits.

² Patients with **WARNINGS** may be appropriate but should be discussed as above and caution shown.

Name:

Signature:

Designation:

Date:

Time:

WEIGHT/DOSE CHART FOR ALTEPLASE

BODY WEIGHT/DOSE CHART FOR ALTEPLASE

Body weight (in stone)	Body weight (in kg)	Total rTPA dose (mg)	10% as bolus (ml)	90% as IV infusion (ml/hr)	No. of 50mg rTPA vials
6 st 4	40	36	4	32	1
6 st 8	42	38	4	34	1
7 st	44	40	4	36	1
7 st 3	46	41	4	37	1
7 st 7	48	43	4	39	1
7 st 12	50	45	5	40	1
8 st 2	52	47	5	42	1
8 st 6	54	49	5	44	1
8 st 12	56	50	5	45	1
9 st 1	58	52	5	47	2
9 st 6	60	54	5	49	2
9 st 10	62	56	6	50	2
10 st	64	58	6	52	2
10 st 5	66	59	6	53	2
10 st 9	68	61	6	55	2
11 st	70	63	6	57	2
11 st 4	72	65	6	59	2
11 st 9	74	67	7	60	2
12 st	76	68	7	61	2
12 st 3	78	70	7	63	2
12 st 8	80	72	7	65	2
12 st 12	82	74	7	67	2
13 st 3	84	76	8	68	2
13 st 7	86	77	8	69	2
13 st 12	88	79	8	71	2
14 st	90	81	8	73	2
14 st 6	92	83	8	75	2
14 st 11	94	85	8	77	2
15 st 2	96	86	9	77	2
15 st 7	98	88	9	79	2
15 st 10	100	90	9	81	2

ADMINISTRATION NOTES

PATIENTS MUST BE CONTINUOUSLY MONITORED PRIOR TO AND DURING DRUG ADMINISTRATION

And for at least 24 hours following administration.

1. Total dose: 0.9mg/kg **MAXIMUM DOSE IS 90 MG** (See body weight/dose chart)
2. **Should be prescribed by, and administration supervised by, a doctor from the stroke team**
3. 10% of total dose given as an IV bolus over 2 minutes by a doctor from the stroke team
4. Give remaining 90% of dose IV over 60 minutes via infusion pump
5. Observe patient for any deterioration during infusion following guidelines for vital signs

It is advised that when 10% of the dose is drawn up, the remaining 90% is left in the vial for later use to prevent accidental administration of 100% as a bolus.

PLEASE HIGHLIGHT WEIGHT AND ADMINISTERED DOSE ON CHART



DATA SHEET FOR SITS

Timeline	Date (dd/mm/yyyy)	Time (hh:mm)
Time and date of stroke onset:		
Time and date of admission:		
Time and date of imaging:		
Time and date of imaging report:		
Time and date of thrombolysis:		

Thrombolysis	YES / NO
Patient's weight:	
Total dose given:	
Administered by:	

Observations	
Blood Glucose:	mmol/l
Rankin Score:	(0-5)
Temperature:	°C

NIHSS	Baseline	2 hours	24 hours	7 days
1A: Level of Consciousness	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3
1B: LOC Questions	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2
1C: LOC Commands	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2
2: Best Gaze	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2
3: Visual	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3
4: Facial Palsy	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3
5: Motor Right Arm	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4
5: Motor Left Arm	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4
6: Motor Right Leg	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4
6: Motor Left Leg	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4	0 / 1 / 2 / 3 / 4
7: Limb Ataxia	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2
8: Sensory	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2
9: Best Language	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3	0 / 1 / 2 / 3
10: Dysarthria	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2
11: Extinction and Inattention	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2	0 / 1 / 2
Total Score				
Blood Pressure	/	/	/	/

Baseline Brain Imaging Report	
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Name:

Signature:

Designation:

MANAGEMENT FOR THROMBOLYSED STROKE PATIENTS



- Continuous cardiac monitoring for 24 hours
- Pulse, BP, RR, oxygen saturations and neurological observations:
 - Every 15 min for 2 hours then,
 - Every 30 minutes for 6 hours then,
 - Every 60 minutes for 16 then,
 - Every 4 hours for the next 72 hours
- Notify medical staff if systolic BP >175mmHg or <120mmHg, or diastolic >100 or <70mmHg for two readings 5 – 10 minutes apart
- Notify medical staff if change in neurological status, (deteriorating conscious level or new/worsening motor weakness, speech disturbance), or bleeding, (e.g. this could be bruising, haematuria or bleeding from a venflon site)
- Bed-rest for 24 hours, patient to be positioned with their head up to a 30-degree angle to promote cerebral perfusion and reduce intra-cranial pressure
- Avoid central venous access, arterial puncture and injections in the first 24 hours
- Avoid nasogastric tube insertion in the first 24 hours
- Avoid placement of indwelling urinary catheter during infusion and 30 minutes after the end of the infusion and preferably not for 24 hours
- No heparin, anti-platelet agents, warfarin or NSAIDs for 24 hours.
- Refer to Stroke Consultant's instructions in the patient's medical notes
- Ensure patients receive adequate hydration, determine with medical staff intra-venous fluid regime. Normal saline at 12 hourly rate is recommended for the first 24 hours, unless the patient is hypotensive – in which case medical advice should be sought
- Ensure patient has sufficient analgesia prescribed