The Royal Gwent Hospital provides a service to thrombolysse patients who have experienced an acute ischaemic stroke. This service is provided by the Stroke team in conjunction with the Emergency Department. The Stroke thrombolysis care pathway has been devised and is available on the Aneurin Bevan University Health Board intranet and within the Emergency Department and should be reviewed by all team members.

**Background**

Stroke remains the third most common cause of death and disability with approximately 150,000 people having a stroke each year in the United Kingdom accounting for over 56,000 deaths in England and Wales (Mant et al, 2004).

The underlying pathology in 85% of patients with stroke is cerebral ischaemia (infarction). Thrombolytic therapy, which works by dissolving the thrombus can potentially re-open the occluded artery and reverse the stroke.

Rt-PA (Alteplase) has been proven a highly effective thrombolytic agent which acts by initiating local fibrinolysis by binding to fibrin in a thrombus (clot) and converts entrapped plasminogen to plasmin. This degrades the fibrin clot with the aim of reducing the impact of ischaemia by restoring blood flow through the occluded artery. Rt-PA was granted a restricted licence for use in acute ischaemic stroke by the European Regulatory Agency in 2003. This was extended in 2012 by the Medicines and Healthcare Products Regulatory Agency for use of RT-PA to within 4.5 hours of onset of symptoms.
There have been a number of RCTs published from North America, Europe and Australia examining the role of thrombolysis in stroke. NICE (2007; 2012) considered the results of all these trials as well as the results of a large pan-European post-marketing study UK Safe Implementation for Thrombolysis in Stroke - Monitoring Study (SITS-MOST)(2008).

Their opinion is that Alteplase (rt-PA) is both clinically effective and cost effective and should be administered to all patients presenting with stroke but within the framework of a specialist setting and providing the strict inclusion and exclusion criteria are adhered too.

The following initial considerations to treatment are:

- Clinical signs and symptoms of acute stroke.

- Time of symptom onset: treatment needs to be administered within 4.5 hours of onset. For ages over 80 years old, treatment needs to be administered within 3 hours of onset.

- Haemorrhage has been excluded.

- Aged over 18 years old* The NINDS criteria for inclusion and exclusion are assessed.

**Useful Contacts**

Stroke Thrombolysis Crash Call: 2222

Stroke Team bleep: 0630

Stroke Hyper acute Unit (Ward C5East): EXT: 44594/3

Please note that a thrombolysis rota giving the daily contacts is available in the thrombolysis file in resus.
Referral Process

FAST Positive or Clinical Symptoms of stroke

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Suspected Ischaemic Stroke: Time of symptom onset determined and < than 4.5 hours OR (< 3 hours if aged 80 years and over)

CRASH CALL Stroke Thrombolysis Team on 2222

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ROSIER screening completed and score >0

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Contact CT Department on EXT: 44348/7 to request immediate CT Head Scan

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Commence NIHSS Assessment

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Haemorrhage excluded on CT following expert CT interpretation by the radiologist

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Meets inclusion criteria.
Discuss with Stroke Thrombolysis Consultant (Via Switch Board)
Consent Obtained/Discuss with relatives

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Thrombolysis appropriate: Administer Alteplase as bolus then infusion over one hour. Remain in RESUS for a minimum of 30 minutes (Ideal standard one hour)

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Transfer to Acute Stroke Unit for Hyper acute care on EXT: 44594/3

References


Developed by:- Kylie Crook/CNS/Stroke Team (RGH) 2010