

Staff Information

Thrombolysis in Acute Ischaemic Stroke

The Royal Gwent Hospital provides a service to thrombolyse 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 to.

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

Useful Contacts

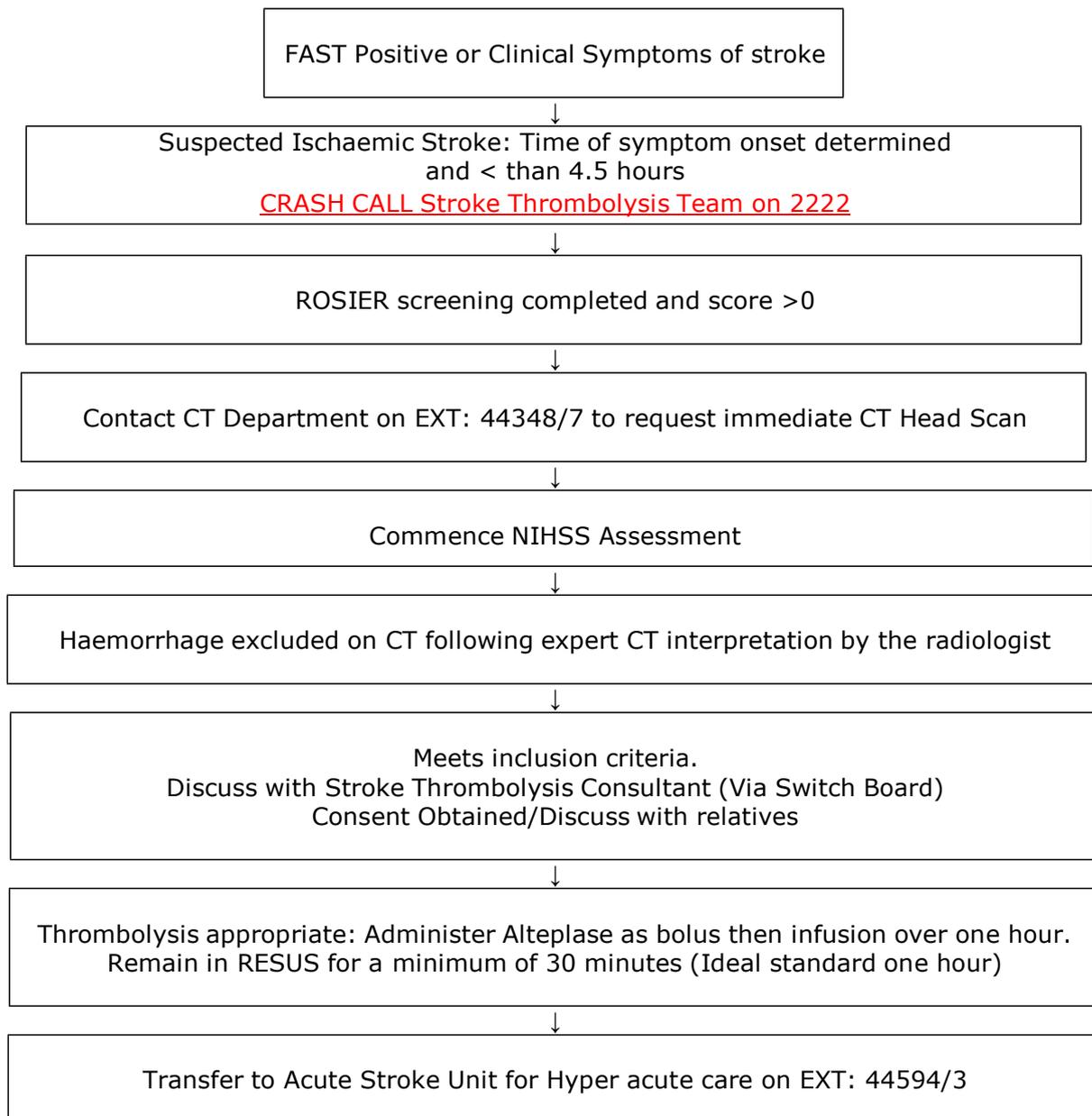
Stroke Thrombolysis Crash Call: 2222

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 via switchboard on 01633 234234.

Referral Process



References

Mant, J; Wade, D & Winner, S (2004). Health Care needs assessment: Stroke.
In: Stevens et al (eds). Healthcare needs assessment: the epidemiologically based needs assessment reviews. 2nd Ed. Oxford: Radcliffe Medical Press.

National Institute of Clinical Excellence (2012). Alteplase for the treatment of acute ischaemic stroke. NICE technology appraisal 264. Available from: www.nice.org.uk/TA264

Multivariable analysis of outcome predictors and adjustment of main outcome results to baseline data profile in RCT: Safe Implementation of Thrombolysis in Stroke-Monitoring Study (SITS-MOST). Stroke (2008); 39(12): 3316-22

Marx, J (2008). Classification System for Stroke Patients. National Institute of Neurological Disorders and Stroke. Available at www.ninds.nih.gov

Lees KR; Bluhmkie von KR; Brott TG; Toni D; Grotto JC et al (2010). Time to treatment with intravenous Alteplase and outcome in Stroke: An updated pooled analysis of ECASS, ATLANTIS, NINDS and EPITHET trials. Lancet (2010); 375: 1695-703.

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

**"This document is available in Welsh /
Mae'r ddogfen hon ar gael yn Gymraeg".**