

Northern Ireland Stroke Network Guidance for Hyperacute Service Management during COVID-19 Pandemic

29th April 2020

Introduction

Stroke will continue to occur at the same or greater rate during the COVID-19 outbreak. Acute stroke is much more likely than COVID-19 to cause death or permanent disability if not treated urgently. Patients with acute stroke symptoms (FAST +ve) should continue to call 999 and local Trusts should endeavour to maintain thrombolysis pathways. For the subgroup of patients with large vessel occlusion (LVO), timely thrombectomy more than doubles the likelihood of a good outcome (NNT 2.6).

Concerns about Existing Pathways and Service Provision

In the context of the COVID-19 crisis, it is likely that rapid assessment and identification of patients with LVO will be more challenging than usual. Nevertheless, given the life-transforming benefits of early intervention, Trusts should ensure that pathways are in place to enable patients with acute stroke to avail of reperfusion therapies including thrombectomy.

Referral for Thrombectomy Service (Operates 8am-5pm, 7 days per week)

Patients should be assessed and referred using the existing pathway. It is recognised that severe COVID-19 related pressures may result in restricted or delayed access to imaging, including CTA. In such circumstances, it is appropriate to

rapidly identify patients who are most likely to benefit from thrombectomy and prioritise accordingly.

Important considerations are:

- (1) **ABC** – Patient is systemically stable (alert to voice, SBP > 100 mmHg, oxygen sats on room air > 94%). If not, then other considerations may be more important
- (2) **Background** – Patient is independent (i.e. lives at home, no care package, able to walk, talk and look after themselves)
- (3) **Clinical features** – Disabling stroke with features suggestive of LVO. No screening scale is perfect, but LAMS is simple and when performed in ED compares favourably with other more complicated scales including the NIHSS(1). Patients with a score of 4 or more should be prioritised for CTA if access is limited by COVID-19 related pressures. Local trusts may wish to consider this in their protocols.

For patients with LVO being referred for thrombectomy, it is mandatory to perform a COVID-19 screen as follows:

- (1) **Symptoms** – any recent symptoms that may suggest COVID-19
- (2) **Self-isolation history** - please confirm details, including contacts such a grocery shopping etc
- (3) **Scan** – CT scan of chest performed immediately after CTA, if the CTA shows LVO.

Patients who screen positive will not be denied thrombectomy. However the safety of the NIAS transfer and RVH stroke teams will depend on this information being accurate. In addition it is essential to assess respiratory status, as need (or anticipated need) for respiratory support will likely take priority over thrombectomy.

Communication with RVH

The existing pathway will continue to be operational – ie the stroke registrar in RVH is contacted by bleep. To facilitate the process and allow discussion of complex cases, the RVH stroke consultants will accept consultant-to-consultant referrals between 9am and 5pm.

Outside these hours, the RVH stroke consultants will be happy to discuss cases on a consultant-to-consultant basis; the stroke consultant on call can be contacted via switchboard.

It is possible that future capacity to perform thrombectomy may reduce for various reasons, including staff availability. In such circumstances, criteria for thrombectomy may become more stringent to ensure that the procedure is offered to those most likely to benefit.

Criteria for Progression to Thrombectomy

During times of limited capacity, the following criteria will be used to identify those most likely to benefit from thrombectomy. This is not the normal practice, a method to ensure most effective use of a limited resource during the COVID-19 crisis. The following criteria may become more stringent if pressures worsen.

- (1) Presentations to RVH **8am – 5pm** (No service outside this time window)
- (2) Disabling deficit with NIHSS >5
- (3) ASPECTS >5
- (4) Baseline mRS 0,1,2
- (5) Proximal large vessel occlusion confirmed by CTA

Other aspects of Patient Management and Repatriation to local hospital

To ensure ongoing availability of this service, we expect repatriation to local hospital at 24 hours. However, given anticipated pressures on all hospitals and the ambulance service, RVH will endeavour to discharge directly patients with an anticipated short LOS.

Recognition of Exceptional Circumstances

This guidance is an agreed local protocol to facilitate urgent stroke care to those most likely to benefit in the current healthcare crisis. It does not reflect normal standards of care. As the crisis deepens, treatment may become more limited and it may not be possible to offer treatment on the basis described above.

References

- (1) https://www.ahajournals.org/doi/full/10.1161/STROKEAHA.117.019228?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed