Top tips for managing stroke

In the latest Irish Medical Times 'Top Tips' series, Dr Joe Harbison, Consultant Stroke Physician at St James’s Hospital offers doctors his top tips on diagnosing and managing stroke.

Top Tip 1: Recognising a stroke or TIA

Strokes are common, affecting more than 10,000 Irish people each year, and around 1,500 may suffer TIA’s. Whilst it is fairly easy to diagnose an acute stroke, a lot of more subtle events can be tricky to diagnose, and about one in five patients seen with suspected stroke and a half with TIA turn out to have another diagnosis.

In the clinical differential of ‘stroke mimics’ the ‘Eight St’ can be useful; Syncope, Seizure (focal seizure or Todd’s palsy), Space occupying lesion, Sepsis (obstipation, delirium or meningitis), Sugar (hyperglycaeemia or metabolic disorders), Somatic (conversion reaction), Seizure (psychogenic) and Substance abuse (intoxication with alcohol or narcotics).

Features that have been found to be more common in ‘stroke mimics’ include loss of consciousness or seizure at onset, both of which can occur with stroke but fairly infrequently. Also common in stroke mimics can be slow or lateralising or focal signs, and signs that are inconsistent with symptoms.

Top Tip 2: How ‘severe’ is the TIA?/TIAs may not be the treatable minor event the name implies, with up to one fifth of patients suffering further strokes or TIA’s within six months. It is now recognised that brain damage may be found in a large proportion of patients who may have had clinically ‘transient’ episodes.

There are features that predispose to an increased risk of further events in the next seven days and recently the ABCDE score has been developed to help estimate the risk. Use e.g. young subjects who are less likely to be diabetic or hypertensive need to have very severe symptoms to be admitted if a strict application is used so exceptions must be allowed.

Top Tip 3: Time is Brain!

It is now understood that ur- gent and active investigation and management improves outcome in both TIA and stroke. The EXPRESS study showed that assessment and active management of TIA patients within 24 hours reduced the risk of recurrent events by 80 per cent compared with conventional care, and a number of Irish hospitals now offer surv- eys by which such patients can be assessed rapidly – either in a clinic or the emergency depart- ment.

Although thrombolysis has significantly changed the out- look for some stroke patients, it should be emphasised that patients presenting to hospital quickly following stroke have a better functional outcome if treated as soon as possible and a number of Irish hospitals now offer surv- eys by which such patients can be assessed rapidly – either in a clinic or the emergency depart- ment.

Top Tip 4: Brain scans on TIA patients

It is now recommended by most guidelines, including the Irish guidelines to be published later this year, that TIA patients should have a brain scan. Ideally the scan of choice should be an MRI scan, which is more likely to identify acute ischaemic changes, but access to these can be difficult. A CT scan will however rule out most significant bleeds or structural lesions if performed with one week of the event.

Top Tip 5: What antithrombotic to use

There are three antithrombotic agents commonly used in Ireland in stroke patients – aspirin, dipyridamole (MPR) and clopidogrel. In general, young aspirin should be used acutely if an ischaemic stroke or TIA is suspected. Typically the in- dividual is left on this higher dose for one or two weeks before the dose is reduced to 75mg or so.

The ESPRIT trial showed that a combination of aspirin and dipyridamole was prob- ably more effective than aspi- rin alone. Dipyridamole, how- ever, can be hard to tolerate because of headache and GIT effects, particularly if started too rapidly.

The PROGRESS study showed that clopidogrel and aspirin or dipyridamole had almost iden- tical efficiency in preventing fu- ture events. Clopidogrel, how- ever, is a pro-drug and late it has been reported that proton pump inhibitors may interfere with the formation of the ac- tive. That said, unlike aspirin, clopidogrel is not associated with an excess of gastric ulceration and arguably co-conomi- tant use of PPI’s is less neces- sary than with aspirin.

Current guidelines recom- mend that aspirin, aspirin/ dipyridamole or clopidogrel may be used for long-term antithrombotic therapy, but there may be slightly stronger evi- dence for the aspirin/dipyri- damole combination.

There is no evidence to date for the long-term use of comb- ined aspirin and clopidogrel and this therapy should gener- ally be used only in stroke pa- tients with another indication for such dual therapy. There is some debate about what ac- tion to take if someone is already taking aspirin suffers a further event and there is con- siderable variation in practice. My practice is to check compli- ance and perhaps add dipyrida- mone or change to clopidogrel if the individual has multiple high risk factors.

It should be noted that all trials to date have shown that antithrombotics only prevent a minority of future events and there is no strong evidence for changing therapy if such an event occurs.

Top Tip 6: Anticoagulation for atrial fibrillation

The North Dublin Stroke study has shown that, in Ireland, the prevalence of cardio-embolic stroke secondary to atrial fibrillation is very high, with over 30 per cent of ischaemic strokes. Anticoagulation with warfarin reduces the risk of stroke by about 70 per cent, compared with a 20 per cent reduction with aspirin, but the study also showed that less than a quarter of patients presenting with atrial fibrillation-related stroke were taking warfarin.

Rather than following very broad guidelines that anyone with atrial fibrillation and an additional vascular risk should be coagulated, many clini- cians now use a risk score such as the CHADS2 which ac- counts for only one to quantify risk. That said, even the CHADS2 is not per- fect, and different perceptions of risk alter the likelihood of prescribing warfarin to a given patient, with many clinicians choosing to prescribe aspirin instead.

Whilst many clinicians can give anecdotal accounts of warfarin disasters, the RAFT trial compared warfarin and aspirin therapy in a group of community-dwelling older people and found that the warfarin had a 3.8 per cent versus 1.5 per cent in compar- ison to the aspirin, with no significant difference in risk of haemorrhage between groups.

Recently the RE-LY study has shown that low doses (10mg) of the oral direct thrombin inhibitor dabigatran, has equal efficacy and superior safety for warfarin, and superior ef- ficiency at higher dose (15mg) without the need for fre- quent INR checks. The drug is already licensed and available for thromboprophylaxis dur- ing joint replacement surgery. The extent and rate of adoption of the drug as a replacement restriction for warfarin is likely to depend on other factors such as drug cost etc.

Top Tip 7: Blood pressure

The most important inter- vention in preventing future stroke or cardiovascular events in people who have suffered a stroke is reducing blood pres- sure (BP). Even cautious reduc- tion in BP in patients who would typically be regarded as having ‘high-normal’ BP will help pre- vent future events.

There is some evidence that although mean BP increases with age, so does BP variability, and very tight control of BP can be chal- lenging without causing hypo- tensive symptoms. We have found that routine use of ambula- tory BP monitoring in stroke patients is invaluable.

Not only will it help determine the individual’s true mean BP, it will also detect other adverse char- acteristics such as extreme, ab- sent or reversed systolic pres- sure waveforms, and widespread nocturnal pulse pressures, all of which are as- sociated with worse cardiovas- cular outcomes independent of BP means.

Top Tip 8: Thrombolysis

There is no doubt that throm- bolysis for stroke is under-util- ized. It is not infrequent for many people with hemianopia. All stroke patients who wish to resume driving need their vis- ual fields checked even if just simply at the bedside.

If there is any doubt as to their cognitive or physical ability to drive, this should be formally assessed and it is now recommended that this assess- ment should be in two parts, with both an occupational ther- apist and a neuropsychologist, and examine and functional assessment and a practical assessment by a driving assessor.

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