



The Hearing Aid Podcasts



Episode 2.2 Show Notes Acute Stroke Management

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Learning Outcomes

Knowledge:

- To recall the causes of acute stroke
- To describe the features of an acute stroke
- To have knowledge of conditions that mimic stroke
- To be able to describe the potential treatment options for an acute stroke

Skills:

- To know what to do if you suspect a stroke
- To understand the role of the MDT in the acute phase of stroke care

Attitudes:

- To recognise that stroke is a potentially preventable and treatable
- To understand that an acute stroke is a medical emergency



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Definitions:

Formal / Scientific Definition:

A Stroke is an episode of acute neurological dysfunction presumed to be caused by ischemia or hemorrhage.

There are two main causes for this: A bleed (haemorrhage) or an infarct.

[AHA/ASA Expert Consensus Document - An Updated Definition of Stroke for the 21st Century](#)

Key Points from Discussion

In this episode we focus primarily on the acute management of ischaemic stroke - although there are certain key differences with the management of haemorrhagic stroke many of the salient points (except drug treatment) are the same.

Acute ischaemia stroke is an acute blockage (occlusion) of one of the arteries supplying the brain.

- Clot (formed elsewhere) or thrombus (in the blood vessel) suddenly blocks the blood vessel so that blood cannot pass along it to brain.
- So the onset **MUST** be sudden too.

Transient Ischaemic Attack (TIA)

- Smaller clots (usually) lasting a much shorter time period - but again causing a blockage and hence disruption to the blood supply to a part of the brain.
- Traditional definition is a neurological deficit lasting less than 24 hours - these days really anything lasting over 4 hours is often considered to be on the 'stroke' end of the spectrum,
- Score TIAs using the ABCD2 scoring system. A score of 4 is high risk for a stroke in the next week (around a 4% chance) and needs urgent investigation and management.

[American Stroke society TIA definition](#)

We talk through cerebral circulation on the podcast. [As an extra revision this is a good review from the visual MD people.](#)

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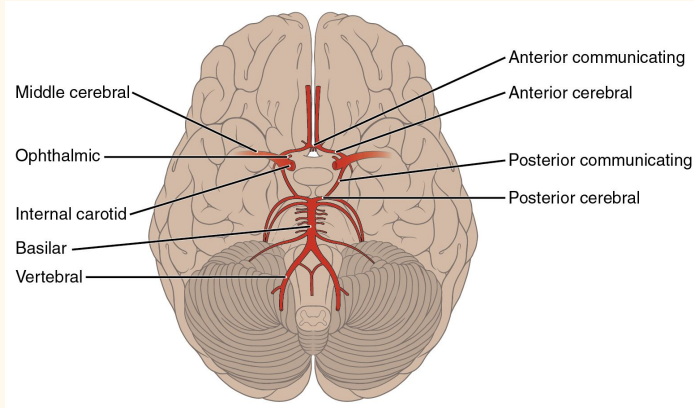
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The specific focal neurological deficit is therefore based on the area of brain affected:

- Global brain function not affected so won't technically cause drowsiness or loss of consciousness: unless lots of oedema causing pressure on other structures (or - brainstem stroke)
- Any area of the brain can be affected, the main ones presenting being: motor, sensory, coordination and speech and then there is higher cognitive function also.
- Speech may be slurred (dysarthria) due to muscle / motor weakness or due to the generation or interpretation of speech or language which is dysphasia. Receptive or expressive. The later would be considered a higher cognitive function.
- Dysphasia can easily be mixed up with confusion, esp when no other signs associated.
- So this is basis of FAST screening: Face, Arm, Speech, TIME (and the blanchford classification)...

You should all go check out this excellent TED talk about acute stroke and the associated book is great too!

[TED Talk - My Stroke of Insight](#)

Time is important due to the advent of thrombolysis (clot busting drugs) which can be given up to 4 ½ hours from the ONSET of the stroke.

Stroke mimics exist and need to be thought through. So following an episode of ? stroke do the following:

- Check blood sugar (is this a hypoglycaemic event mimicking a stroke)
- Check the blood pressure (the stroke team will want to know it! - also low BP may be affecting cerebral perfusion)

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- Check oxygen saturations and normalise them (the brain needs oxygen to work)
- Arrange urgent CT brain (to exclude haemorrhage or subdurals etc.)
- Take a history (think about epilepsy, migraine etc)

[Strokes: Mimics and Chameleons, Practical Neurology 2013](#)

Thrombolysis

A specialist treatment. Given within 4.5 hours of the event. Most units will have a clear protocol to follow - find yours and get to know it.

Exclusion criteria tend to be linked to the risk of bleeding - but follow your local guidelines

- Originally in the <80 yrs only.
- But the IST 3 trial looked at extending the time period and also older patients.

[IST-3](#)

Clot Retrieval

This is a newer treatment and has been shown to improve functional outcomes in several trials in selected cases even for patients who cannot have thrombolysis. It consists of removing the clot from the blocked vessel in the brain by getting access through the groin with a stent retriever within 6 hours of the stroke. The procedure is done by a neuroradiologist

[NICE Guidance IPG548: Mechanical clot retrieval for treating acute ischaemic stroke](#)

Following initial treatment

- 1) Transfer to a stroke unit - patients do better there!
- 2) Assess swallow - and give Aspirin if able to (PR if not)
- 3) Assess hydration - may need to give iv fluids
- 4) Early mobilisation - so early physiotherapy involvement is needed
- 5) BP control if high
- 6) Look for the cause (think AF - and check ECGs / 24 hour tapes etc.).

Curriculum Mapping:

This episode covers the following areas (n.b not all areas are covered in detail in this single episode):

Curriculum	Area
NHS Knowledge Skills Framework	Suitable to support staff at the following levels: <ul style="list-style-type: none">● Communication level 2-3

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	<ul style="list-style-type: none"> ● Personal and People Development: Levels 1-3 ● Health and Safety: Level 1-2 ● Service Improvement: Level 1 - 2 ● Quality: Level 1-3 	
Foundation curriculum	Section 1.4 2.1 6.2 7.3 7.5 8	Title Team working Patient as centre of care Evidence and guidelines Diagnosis and clinical decision making Safe prescribing Recognition and management of the acutely ill patient
Core Medical Training	Team working and patient safety Management of long term conditions and promoting self-care Communication with colleagues and cooperation Evidence and guidelines Geriatric Medicine Weakness and Paralysis Abnormal Sensation Speech Disturbance Neurology	
GPVTS program	Section 2.02 Patient safety and quality of care Section 3.03 Care of acutely ill people Section 3.05 - Managing older adults <ul style="list-style-type: none"> ● Core Competence: Managing medical complexity ● Core Competence: Working with colleagues and in teams ● Core Competence: Practising holistically and promoting health Section 3.12 Cardiovascular health	
ANP (Draws from KSF)	Conditions the ANP should recognise and initially manage. 9: Stroke Section 7.5 Stroke Section 8 KSF HWB7 Level 4.	
Core Clinical Conditions for the Physician Assistant	1B conditions Stroke	

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