Emergency Department Admission

Time of arrival: 03:00

90-year-old Right-handed male

PC
- Left sided weakness of face, arm and leg

HPC
- Woke at 2am to go to the toilet, wife saw him mobilise without difficulty
- On getting back to bed sudden onset of weakness down left face, arm and leg – fell out of bed onto the floor

PMHx	PSHx
- Atrial fibrillation (not on anticoagulation)	- Nil
THx	SHx
- Nil	Non-smoker, nil EtOH
	Independent all activities of daily living

Examination

BP 160/80	Sats 99% o/a
HR 80	RR 14
BM 5.6	Afebrile

Neurological examination (summary)

Severe weakness left face, arm and leg.
Speech dysarthric but not dysphasia.
Gaze deviation to the right.
Left homonymous hemianopia.

National Institute of Health Stroke Scale (NIHSS) = 20

National Institute of Health Stroke Scale (see appendix for score explanation)

|	Score		Range
Level of consciousness	0		0-3
LOC Questions	0		0-2
LOC commands	0		0-2
Best Gaze	2		0-2
Visual fields	2		0-3
Facial palsy	2		0-3
	Right	Left	
Motor Arm	0	4	0-4
Motor Leg	0	4	0-4
Limb Ataxia	0		0-2
Sensory	2		0-2
Language	1		0-3
Dysarthria	1		0-2
Extinction and Inattention	2		0-2

Stop and think 1

1. **The patient is presenting with a suspected stroke, based on the examination findings where in the nervous system would you localise the problem to be? Which vascular territory do you suspect is involved?**
2. **Why do you think the eyes are deviated towards the right?**
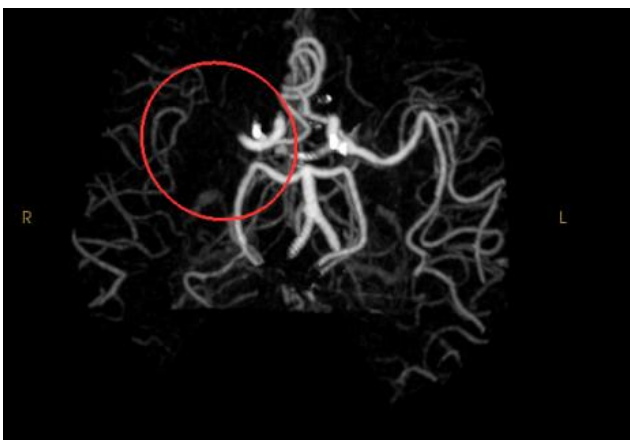3. **What investigation should be performed next?**

Investigations

CT head

No evidence of intracranial haemorrhage
Hyperdense right MCA artery without signs of established infarct.
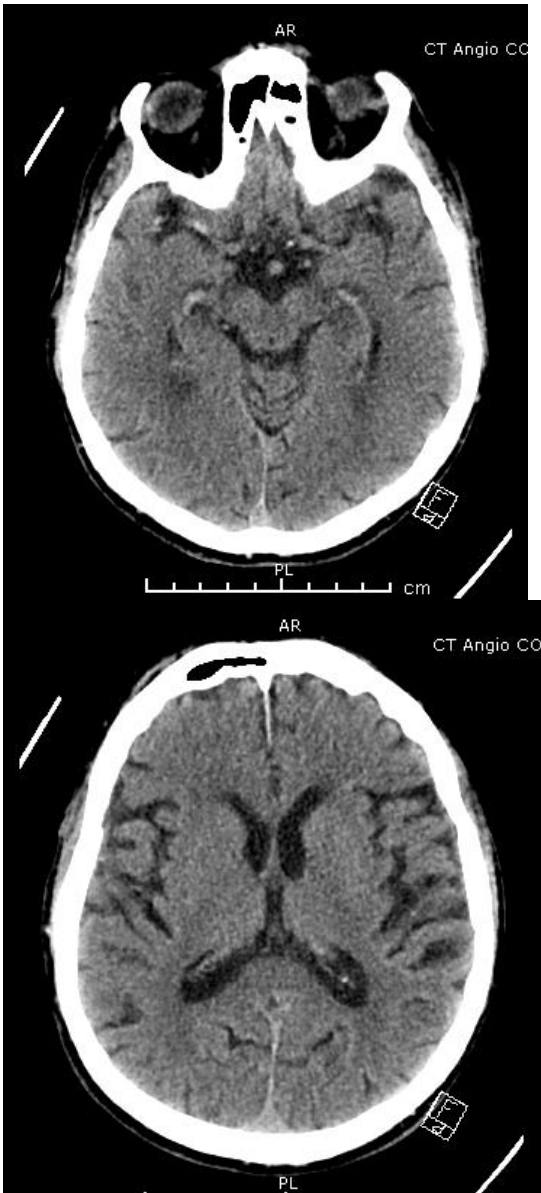
CT Angiogram

Occlusion of the proximal right MCA artery (M1 occlusion)

Stop and think 2

1. **What are the treatment/management options in this case?**
2. **If the patient hadn't been seen well when he woke at 2am are there any additional investigations that you might perform at this stage?**
3. **What is the cause for this patient's stroke and how would you manage this?**

National Institute of Health Stroke Scale

www.stroke.nih.gov/documents/NIH_Stroke_Scale_508C.pdf

Task	Score	
Level of consciousness	0 = Alert; keenly responsive. 1 = Not alert; but arousable by minor stimulation to obey, answer, or respond. 2 = Not alert; requires repeated stimulation to attend, or is obtunded and requires strong or painful stimulation to make movements (not stereotyped). 3 = Responds only with reflex motor or autonomic effects or totally unresponsive, flaccid, and areflexic.	
LOC Questions The patient is asked the month and his/her age.	0 = Answers both questions correctly. 1 = Answers one question correctly. 2 = Answers neither question correctly.	
LOC commands The patient is asked to open and close the eyes and then to grip and release the non-paretic hand.	0 = Performs both tasks correctly. 1 = Performs one task correctly. 2 = Performs neither task correctly.	
Best Gaze Testing of horizontal gaze.	0 = Normal. 1 = Partial gaze palsy; gaze is abnormal in one or both eyes, but forced deviation or total gaze paresis is not present. 2 = Forced deviation, or total gaze paresis not overcome by the oculocephalic maneuver.	
Visual fields Visual fields (upper and lower quadrants) are tested by confrontation.	0 = No visual loss. 1 = Partial hemianopia. 2 = Complete hemianopia. 3 = Bilateral hemianopia (blind including cortical blindness).	
Facial palsy Ask the patient to show teeth or raise eyebrows and close eyes.	0 = Normal symmetrical movements. 1 = Minor paralysis (flattened nasolabial fold, asymmetry on smiling). 2 = Partial paralysis (total or near-total paralysis of lower face). 3 = Complete paralysis of one or both sides (absence of facial movement in the upper and lower face).	
	Right	**Left**
Motor Arm The limb is placed with arm in an outstretched position for 10 seconds.	0 = No drift 1 = Drift, but does not hit bed. 2 = Some effort against gravity; limb drifts to bed within 10 seconds. 3 = No effort against gravity; limb falls. 4 = No movement.	0 = No drift 1 = Drift, but does not hit bed. 2 = Some effort against gravity; limb drifts to bed within 10 seconds. 3 = No effort against gravity; limb falls. 4 = No movement.
Motor Leg The limb is held at least 30 degrees off the bed for 5 seconds.	0 = No drift 1 = Drift, but does not hit bed. 2 = Some effort against gravity; limb drifts to bed within 5 secxonds 3 = No effort against gravity; leg falls to bed immediately. 4 = No movement.	0 = No drift 1 = Drift, but does not hit bed. 2 = Some effort against gravity; limb drifts to bed within 5 secxonds 3 = No effort against gravity; leg falls to bed immediately. 4 = No movement.

Limb Ataxia Testing of finger-nose ataxia and heel-shin ataxia.	0 = Absent. 1 = Present in one limb. 2 = Present in two limbs.
Sensory Testing of pinprick sensation	0 = Normal; no sensory loss. 1 = Mild-to-moderate sensory loss; patient feels pinprick is less sharp or is dull on the affected side; or there is a loss of superficial pain with pinprick, but patient is aware of being touched. 2 = Severe to total sensory loss; patient is not aware of being touched in the face, arm, and leg.
Language Assessment of language	0 = No aphasia; normal. 1 = Mild-to-moderate aphasia 2 = Severe aphasia 3 = Mute, global aphasia; no usable speech or auditory comprehension.
Dysarthria Assessment of articulation	0 = Normal. 1 = Mild-to-moderate dysarthria 2 = Severe dysarthria
Extinction and Inattention Testing of tactile and visual neglect	0 = No abnormality. 1 = Impairment in one modality 2 = Impairment in two modalities