Atypical presentations of Strokes- FAST -ve

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Typical strokes – FAST +ve

- FAST is approx 80% sensitive and 80% specific
- For this presentation ~ Atypical strokes = ‘FAST’ ‘-’ ve
- Which other common symptoms do you come across in stroke?
Functional areas of brain

- **Broca’s area**
  - Speech Muscles

- **Motor Function**
  - Voluntary movement

- **Sensory Function**
  - Sensations from muscle and skin

- **Wernicke’s area**
  - Comprehension of Written and Spoken language

*Image: shutterstock*
Brain areas missed by ~‘FAST’
Case History – Confused on sofa

- 75 year old woman
- Diabetic, hypertensive
- Usually fit and well, drives,
- Found by daughter – was not answering calls for a day.
- Sat on sofa, strong smell of urine and faeces
- Confused, no weakness or obvious speech problems, dehydrated
Case History – Confused on sofa......

- Admitted to hospital
- Bloods, WCC 15, Urea 12. CRP 200. urine +ve
- Treated with IV fluids and IV antibiotics
- No improvement, no weakness
- Varying levels of confusion/awareness? Delirium
- Day 3. drowsy – GCS 9,
Strokes - frontal lobe - higher functions affected

- Higher mental functions
- Concentration
- Planning
- Judgement
- Emotional expression
- Creativity
- Inhibition
Case History – Shifting Gears

- A 56 year old taxi driver
- Hypertension, smoker
- Since around 11.00 am he feels his left hand/arm has gone funny, he is left handed
- He is not able to change the gear, occasionally misses the gearstick, and then he cannot move the gear properly. His grip and hand movements seem normal, yet he finds it difficult button his shirt, hold a spoon, pen etc.
- CT scan –ve, MR scan shows small frontal infarct
- What if the stroke was on the left side and it was his right hand was affected
Strokes- pre-motor Cortex- no weakness, impairment of function

Complex movements - pre-motor cortex

Reaching,
Sensory Guidance of Movements,
Eye Movements,
Hand Movements,
Mirror Neurons (Imitating Others)
Case History- Disappearing wine glass

- 78 year old man was having dinner in a restaurant with family
- Half way through the meal, he noticed that he could not see the wine glass on the right.
- If he moved his head to right, he could see the glass, but if he keeps his head straight, he could not.
- Ex Army- no Panic
- 15 minutes later symptoms resolve
- Next morning he wakes up with same symptoms
Strokes- pre-motor Cortex- no weakness, impairment of function
Case history- Colleague’s name

- 46 year old paramedic
- Busy afternoon, 4.30
- Suddenly felt strange
- Could not remember the name of the colleague
- Could not recall the patient history clearly
Strokes of the temporal Lobe

- Confusion
- Short term Memory impairment
- Emotional issues
- Usually associated with comprehension and speech problems
- Misidentification
- Association issues
Case History – going for a walk

- 49 year old female, fit and well
- Planning to take dogs for a walk, bent down to talk to them
- Sudden onset of vertigo- room spinning around, then lost her vision, and couldn’t walk. Shouted to husband for help
- Got her to couch. After few moments patient lost consciousness, later started shaking movements of her arm and leg.
- Paramedics, pupils large poor reaction. GCS 8 E1V1M6. bypassed DGH, to CSC. Saturday noon.
The Dangerous ‘Dot’ sign
At risk from Basilar Artery Occlusion (BAO)

- Outcomes
  - Death 40-70%
  - Severe disability 20-40%
  - Locked in syndrome
  - Quadriplegia

- This patient

- Senior Neuro-radiologist sees the scan, identifies the BAO, calls an interventionist in, clot retrieval in 1 hr

- Outcome -Residual minor strokes, no symptoms. Home on day 3.
Case history - Mother and baby

- 35 year female
- Was sleeping on the sofa with baby in lap for a few hours
- Woke up. Sat up straight, suddenly double vision, dizziness
- Can see well with one eye closed

- Seen by ENT
- MR negative, diagnosed as cholesteatoma
- Double vision again one month later; MR positive
Functions of the brainstem

- Upper part
  - Eye movements,
  - Balance,
  - Sensations,
  - Movements

- Lower part - autonomic centres
  - Facial muscles and sensation
  - Breathing,
  - Heart & Blood pressure
  - Swallowing, Autonomic systems

- Cerebellum
  - Co-ordination
  - Balance
Case history – Sunday night out

- 39 year male, out with friends in pub till midnight
- 1 am sudden onset of severe pain behind L eye
- 3 am sudden onset of severe persistent vomiting
- Unable to walk or stand, but no weakness of limbs
MRI Scan and MRI Carotid and Vertebral art.

Symptoms Associated with Missed Stroke Diagnosis

FAST picks up only 80% of symptomatic strokes, atypical presentations include:

- Sudden loss of vision - either of one eye or one half of visual field, double vision, gaze palsy, very rarely complete loss of vision
- Sudden loss of balance with persisting vomiting, vertigo
- Sudden onset of confusion, memory impairment
- Sudden change in conscious level in a healthy person
- Sudden loss of common skills e.g. Reading, Arithmetic,
- Sudden onset of neglect of one side of body
- Around 30-50% of TIA's could be potentially strokes,
- Some strokes may be silent, found only on Imaging
Summary

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