Headache

Jul 14, 2015 | 0 | General medicine,neurology,onthepods

James talks to Dr Penny Gordon about the approach to the assessment and management of patients with acute headache on the wards.

Summary Writer: Jenny Liu

Editor: James Edwards

Interviewee: Penny Gordon

About Dr Penny Gordon

Dr Gordon is currently in her second year of training as a Neurology Advanced Trainee. She is completing a non-core year at Royal Prince Alfred Hospital and the George Institute, which combines stroke research and clinical work in nerve conduction studies and epilepsy.

Penny has been at Royal Prince Alfred Hospital since internship and completed Basic Physician training in 2013. She studied medicine at the University of Sydney and prior to that obtained a Bachelor of Science as well as studying pharmacy. Penny has an interest in teaching, particularly teaching clinical examination skills and has been involved in organising teaching sessions for Basic Trainees in preparation for their clinical exams.

Headache

With Dr Penny Gordon, Neurology Advanced Trainee at Royal Prince Alfred Hospital, New South Wales, Australia

Case 1

You are on a night shift and are called by the nursing staff about a patient on the haematology ward about a patient with pancytopenia who has acutely developed a severe headache.

1. Initial questions over the phone?

- This is a potentially very sick patient – need to assess the clinical urgency of the case
- Ask about the patient's GCS (alert or drowsy)
- Vital signs – history of rapid increase in BP? Febrile?
- Current treatment and progress on the wards?
- Platelet count

2. What are some of the most sinister causes of headache on the wards?

- In this case of a patient with pancytopenia they are at risk of intracranial hemorrhage due to low platelet counts, or meningitis with neutropenia
- Posterior reversible encephalopathy syndrome (PRES) is an uncommon syndrome in haematology patients on cytotoxic agents
- Pregnant women with new headache: pituitary apoplexy, cerebral venous thrombosis (also in patients in coagulopathic states)
- Subarachnoid hemorrhage: trauma patients may have a delayed presentation of subarachnoid hemorrhage on the wards or may occur in cardiology patients with infective endocarditis
- Subdural hemorrhage: geriatric or alcoholic population with history of falls
- Space occupying lesions: immunocompromised patients with another nidus of infection

3. What is your initial approach by the bedside?

- Vital signs? How well/unwell does the patient look?
- **History:**
    - Red flags about headaches – new/unexpected headache, 'worst headache', concurrent infection e.g. sinus infection, age>50
    - Characterise pattern of headache
    - Headache associated with postural change is often associated with raised ICP (worse bending forward, coughing/sneezing)
- **Examination:**
    - GCS, vital signs
    - Examine pupil size, asymmetry, reactivity to light. Pinpoint pupils suggest pontine lesions, fixed midsize pupils suggest mid-brainstem lesion. One pupil dilated can suggest raised ICP, intracerebral hemorrhage, or posterior communicating aneurysms
    - Assess for meningism
    - Full neurological examination
    - Fundoscopy: appropriate although JMOs are not used to this, may be difficult to find an ophthalmoscope on the wards. Photophobia can also make it difficult. Look for signs of papilloedema-blurring of disc margins, engorged veins, retinal hemorrhages
- **Investigations:**
    - **Non-contrast brain:** most accessible after hours. Indications: any patient with altered mentation, cognitive dysfunction, focal neurology (especially with associated seizures), any patient age>50, HIV/immunosuppressed patients
    - **Contrast CT brain:** immunocompromised patients with possible nidus of infection that may seed to the brain, and those with history of

malignancy
    - **Blood tests:** History and examination more helpful than specific blood tests unless underlying vasculitis suspected (e.g. ESR, vasculitic screen relevant)

4. When should the junior doctor contact the neurology registrar?

- If you find any red flags or focal neurology on examination – these patients should be discussed with the registrar
- Headache with associated fever (encephalitis/meningitis) – further urgent investigation/management are necessary
- Discuss any patients you are considering a CT scan – is the patient safe/stable enough to go to radiology department after hours?
- Any patient with dropping GCS

5. When you do the CT brain it shows an intracranial hemorrhage and as the patient is returning from radiology they start to drop their GCS. What would you do now?

- Urgent help necessary – activate a MET/ICU assist call
- Risk of brainstem herniation/death if not acted upon quickly
- Urgent intubation/ventilation may be necessary
- Urgent referral to neurosurgical team

Case 2

You are asked to chart analgesia for a 65-year-old patient on the renal ward who has a dull frontal headache but she reports as having this headache many times before.

1. What characteristics would help you distinguish different causes of chronic headaches?

- Important to assess the patient rather than just chart analgesia
- Common causes are migraines, tension headaches, cluster headaches and trigeminal neuralgias
- Migraine: typically unilateral, pulsatile quality moderate to severe, aggravated by minor activity. May be associated with nausea/vomiting/photophobia
- Tension: episodic, generalised but can be unilateral, typically describing a tight band arising or referring down to the neck
- Characterise frequency of headache – ?daily

- Some headaches may be associated with medication overuse – enquire about usual medication use for analgesia

2. What analgesia would you recommend for a headache? Are there any things to avoid?

- In primary headache disorders there is no role for opioids especially codeine – can contribute to nausea and addictive potential
- Simple analgesics e.g. paracetomol for tension type headaches
- Avoid NDAIDS/aspirin in renal patients

Take home messages

- Get a good description of the headache – in the patient's own words
- Be willing to re-evaluate headache –the clinical picture can change
- When in doubt, ask for help!

Related Podcasts

- Headache in the Emergency Department
- Vertigo and dizziness
- Seizures

Tags: #analgesia,#cluster headaches,#focal neurology,#headache,#migraine,#neurological examination,#neurology,#neurology consult,#neurosurgical,#pain,#tension headache,#trigeminal neuralgias