CASE 14 Migraine

INFORMATION FOR THE DOCTOR

Name	Eddo Mpofo
Age	22
Social and family history	Single, no children, studying engineering at university
Past medical history	• Soft tissue R knee injury 6 months ago – had physiotherapy • Closed fracture L little finger 5 years ago • Migraine for 6 years • Greenstick fracture R radius 12 years ago • Asthma (mild) – triggered by cats and URTIs
Current medication	• Sumatriptan 100mg tablets; if symptoms recur, repeat dose after at least 2 hours. Maximum 300mg in 24h • Salbutamol inhaler PRN
Clinical values BMI BP	 23 122/76

INFORMATION FOR THE PATIENT

You are Eddo Mpofo, a 22-year-old university engineering student, who has come to discuss medication for your migraine. You have had migraine for six years. You get a one-sided, intensely painful headache (*"like someone sticking a knife through my upper teeth into my eye socket"*). The pain comes on without warning though sometimes you get a vague feeling that you will soon get a migraine. When this occurs, you need to take your sumatriptan tablets immediately.

When the headaches first started, you were told to take ibuprofen and paracetamol but this often failed to give relief so the GP you saw when you were at school prescribed sumatriptan, which worked well, until now, your last year at uni. The attacks have become frequent, almost weekly, are severe (8–9/10 without medication; 4/10 with medication) and can last anything between 3 and 12 hours. Now, when you get a migraine, you need to sleep and find it difficult to continue working with the headache, despite taking the sumatriptan. If you persist studying or working (as a part-time barman), you get nausea and vomiting and eventually have to lie down in a dark and quiet room. The migraine can occur at any time. If you haven't eaten, or if you are slightly dehydrated and working hard, you are more likely to have an attack. It has become difficult to attend lectures and to study.

During your A levels you tried amitriptyline but it gave you a dry mouth and an increased appetite. You put on 4kg in a month. The amitriptyline made you drowsy; studying and paying attention in class was difficult. Your GP took you off amitriptyline and told you to carry the sumatriptan tablets in your wallet and take them immediately. This worked until now. While the sumatriptan takes the edge off the pain, the nausea and vomiting seem to have worsened. You are not sure how much of the sumatriptan you are vomiting up. You have an important examination in six weeks. You would like new tablets that are more effective but something that does not make you feel tired and drowsy. Your opening statement on presentation today is *"I've come to discuss my migraine tablets"*.

Information to reveal if asked

General information about yourself:

- You are working hard at university and if you remain on track, it looks like you may be taken on by a large engineering company at which you did interesting work experience.
- You work as a barman a few nights a week.
- You play squash and do weights. You like to keep healthy.
- You live in a student house with 5 friends, including your girlfriend who is reading English Literature.
- You do not smoke or take illicit drugs.

Further details about your condition:

- Your migraine, you feel, is currently aggravated by exam stress. When you work hard, with intense concentration, to tight deadlines, reduce your sleep and skip meals, you are more likely to get migraine. As a result, you have learnt to be disciplined, especially in the two months leading up to exams, when you go to bed at specific times and get at least 6 hours of rest.
- If specifically asked about your lifestyle, you are a non-smoker. You drink 3 or 4 cans of beer with friends 2 – 3 nights per week. You share one or two bottles of wine with your girlfriend most weekends. You rarely get drunk.
- You do not think that any specific food or alcohol or activities trigger your migraine.

Your ideas:

- You think that the extra work and worry relating to your impending exams aggravated your migraine but you fear there is little you can do at present to reduce the stress.
- Your mum advised you to eat ginger to 'settle the stomach' but the smell of ginger aggravates your nausea. She also told you about feverfew but you think tablets are better than these folklore remedies.
- You really didn't get on with amitriptyline and you are reluctant to try it again because of your experience of its side-effects, particularly drowsiness and a 'woolly head'.
- You would prefer a tablet like sumatriptan, only stronger. You would prefer to avoid a daily tablet like amitriptyline.

Your concerns:

- You are worried about taking daily tablets in case you develop side-effects.
- You are worried about the effect the migraine is having on your work (studying and being attentive in lectures) and the effect on your social life. You are spending so much time sleeping off the pain, you hardly have any time left over to spend with your girlfriend.

Your expectations:

- You expect to get better medication for your migraine, preferably a tablet that you take only when you get the headache rather than preventative medication.

Medical history

You have mild asthma, worse with a cold. You only use your salbutamol inhaler when you have a cold or you are in contact with cats.

Social history

You are enjoying your time at university and happy with your favourable job interview.

Information to reveal if examined

An examination is not required.

SUGGESTED APPROACH TO THE CONSULTATION

Targeted history taking:

- What are Eddo's symptoms now? Describe the migraine. Where is the pain? Elicit intensity, duration, aggravating and relieving factors.
- Are there any new features (e.g. neurological deficit) to his migraine? Has he noticed any changes to his ability to think (cognition), any fever (recent travel/ HIV), headache in relation to exercise?
- Describe the nausea and vomiting. Does this occur without headache?
- What tablets does he use for treatment of the acute attacks? In terms of reducing pain (using a pain score), how effective is paracetamol, ibuprofen, sumatriptan, combination of sumatriptan with ibuprofen?
- What is the frequency and length of the attacks with and without medication?
- What activities does the migraine limit?
- For how long did he take amitriptyline, and at what dose? What were the side-effects?
- Did the side-effects interfere with his work and home life? How?
- Is he aware of other treatments (immediate and prophylactic)?

- Does he have any ideas about how he could reduce the intensity, duration, frequency and impact of his migraine?
- What are his concerns? Is he worried about the knock-on effect of disabling migraine on his studying, work and social life? Is he worried about headache being a symptom of a different illness?
- What are his expectations: did he have any specific medication in mind; did he want to discuss feverfew, did he want a neurology referral?
- What is his general health like? – get more information about his asthma.

Targeted examination:

- This case does not require the candidate to perform a targeted physical examination.

Clinical management:

- Empathise with Eddo: the migraines are severe, are adversely affecting his life, and are important to treat.
- He has been using his acute treatment as soon as gets the migraine, but he could try an anti-inflammatory (ibuprofen 400mg) or aspirin 900mg or paracetamol 1g with sumatriptan 100mg **and** an anti-emetic (such asprochlorperazine – oral or buccal). The alternative is to step up to zolmitriptan orodispersible – 2.5mg, repeated after not less than 2 hours, increasing to 5mg for subsequent attacks if 2.5mg is unsatisfactory. The maximum dose is 10mg in 24 hours. The step after orodispersible tablets is to use a nasal spray such as zolmitriptan nasal spray 5mg per spray (maximum dose 10mg in 24 hours). The step after that is to use sumatriptan 6mg subcutaneous injections. It may be useful to discuss the ladder for stepping up triptans (tablets to orodispersible/ wafers to nasal spray to injection) with Eddo.
- Discuss the option of prophylaxis: beta-blockers (propranolol) or topiramate are first-line choices, but in view of his asthma, beta-blockers are contra-indicated. Second-line options include a course of acupuncture or gabapentin (up to 1.2g/d, unlicensed indication).
- Establish the aims of treatment: to reduce the frequency, intensity, duration and impact of the attacks. However, the best that may be achieved with prophylaxis is a 50% reduction in frequency (and sometimes also a reduction in intensity) of the attacks.
- Address the patient's ideas: that exam stress may be intensifying his nausea and because he is vomiting up his sumatriptan, an alternative to a tablet may be needed. Orodispersible wafers are a good alternative; then nasal spray, then subcutaneous injections. Alternatively, he could try buccal prochlorperazine.
- Address the patient's concerns: that migraine prophylaxis medication is

limited to amitriptyline, which for him has unacceptable side-effects. He may be interested in topiramate, acupuncture or riboflavin.

- Address his expectations: to get a prescription for different migraine tablets. Prescribe an evidence-based treatment, in line with *BNF* advice.
- Confirm his understanding of acute and prophylactic treatments for migraine.
- Safety-net: describe when and why Eddo should next consult.

Interpersonal skills:

This case tests the doctor's ability to present the treatment options (based on current UK guidance) to the patient. The options need to be communicated clearly, in a balanced manner and in jargon-free language so that the patient understands the potential benefits and risks. By the end of the discussion, the patient should feel sufficiently informed that he can make his own decision about which option is best for him.

Good communication with the patient:

- explores and empathises with the adverse impact of the migraines, and amitriptyline, on the patient's life.
- identifies key clinical clues, such as asthma being a contra-indication to the prescription of beta-blockers.
- responds to the patient's preferences for acute migraine medication, acknowledging the stress of impending exams.
- discusses medication options and encourages concordance – works in partnership with the patient.
- provides explanations that are relevant and understandable to the patient.

Poor communication with the patient:

- does not inform the patient of his options, both acute and prophylactic. The doctor prescribes an alternative medication without involving the patient in the decision.
- instructs the patient. The second half of the consultation is dominated by the doctor 'telling' the patient what to do, instead of a two-way conversation where the patient is asked about what he already knows and the important blanks filled in by the doctor in a conversational style.
- uses inappropriate or technical language.

BACKGROUND KNOWLEDGE REQUIRED FOR THIS CASE

NICE (CG150) (2012) **Headaches: Diagnosis and management of headaches in young people and adults.**

Acute treatment

1. Offer combination therapy with an **oral triptan and an NSAID**, or an oral triptan and **paracetamol**, for the acute treatment of migraine.
2. When prescribing a triptan start with the one that has the lowest acquisition cost; if this is consistently ineffective, try one or more alternative triptans.
3. Consider an **anti-emetic** in addition to other acute treatment for migraine even in the absence of nausea and vomiting.
4. Do not offer ergots or opioids for the acute treatment of migraine.
5. For people in whom oral preparations for the acute treatment of migraine are ineffective or not tolerated: offer a non-oral preparation of metoclopramide or prochlorperazine **and** consider adding a ***non-oral NSAID or triptan*** if these have not been tried.

Prophylactic treatment

1. Offer **topiramate** or **propranolol** for the prophylactic treatment of migraine according to the person's preference, comorbidities and risk of adverse events. Advise women and girls of childbearing potential that topiramate is associated with a risk of fetal malformations and can impair the effectiveness of hormonal contraceptives. Ensure they are offered suitable contraception.
2. If both topiramate and propranolol are unsuitable or ineffective, consider a course of up to 10 sessions of **acupuncture** over 5–8 weeks or **gabapentin** (up to 1200mg per day) according to the person's preference, comorbidities and risk of adverse events.
3. For people who are already having treatment with another form of prophylaxis such as **amitriptyline**, and whose migraine is well controlled, continue the current treatment as required.
4. Advise those with migraine that **riboflavin** (400mg once a day) may be effective in reducing migraine frequency and intensity for some people.

Relevant literature

For diagnostic criteria and management guidelines, see www.bash.org.uk/