1. Medicines causing hyponatraemia

A trainee pharmacist colleague asks you whether paroxetine, digoxin, or ramipril can cause hyponatraemia. A consultant has asked her to check this out for an elderly female patient who currently has a low plasma sodium level.

Suggested questions to ask include:

(a) What is the plasma sodium level, and how has the patient been managed?
You need some idea of how serious the condition is in order to decide how urgent the problem is. Have any of the drugs that might be responsible already been stopped? Has this led to any improvement?

(b) How long has the sodium been low, and when were each of the drugs started?
The timing of onset of the condition, if known, together with the answer to the second part of this question, will help you to determine how likely it is that a particular drug is responsible. Once you start to investigate the drugs involved you may find useful information on how quickly hyponatraemia develops as a side effect.

(c) Is the patient on any other drugs?
Has the enquirer just picked out the drugs that he or she thinks may be responsible and ignored other likely causes? Are there drugs that have been stopped in the past few days that might have been to blame? What about OTC drugs, complementary medicines, or drugs of abuse?

(d) What medical problems does the patient have?
Does the patient have any potential medical causes for hyponatraemia? For example some endocrine conditions, fluid balance problems and tumours may cause hyponatraemia. If the patient has renal or liver impairment, has this led to accumulation of a drug that has then caused the hyponatraemia?

Suggested sources:

- SmPCs, Martindale, Micromedex, Lexicomp or AHFS Drug Information if you have access.
- You might also look for specific papers on each drug causing hyponatraemia on Embase or Medline, or a review of drug-induced hyponatraemia.

2. Cross-sensitivity between ACE inhibitors and ARBs

A junior doctor on your ward asks if a patient who is allergic to ramipril can safely be given losartan.

Suggested questions to ask include:

(a) What was the allergic reaction? How severe was it?
ACE inhibitors cause a range of ADRs, so you need to establish the exact nature of the problem. Was this an immune-mediated allergic reaction (e.g. angioedema) or a non-allergic reaction (e.g. nausea, diarrhoea).

(b) When did the reaction happen?
Is this a problem that has happened during this inpatient admission, or something on the patient's historical record? If this has happened recently then you may be able to gather more information, such as the time to onset, to help you accurately assess whether the patient has suffered an allergic reaction.

(c) Does the patient have any other allergies?
Has the patient had allergic reactions before with other medicines? If cross-sensitivity is possible you will need to offer an alternative and you want to ensure that you don't offer another medicine that the patient could be allergic to.

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(d) Is the patient on any other medication? What medical conditions does the patient have?
These questions are necessary to check for interactions and suitability of any alternative you recommend.

Suggested sources:

- SmPCs for contraindications and interactions, and possibly for details of cross-sensitivity.
- Martindale, Micromedex, AHFS Drug Information, Lexicomp if you have access.
- If these are unhelpful try Embase, Medline or experts in the field of allergy (e.g. AAAAI, BSACI)

3. Antidepressants and epilepsy

A GP telephones you to ask which antidepressant is recommended in patients with epilepsy.

Suggested questions to ask include:

(a) Is this for a specific patient?
It could be a general enquiry for educational purposes or to help inform a practice policy. However, if it is for a specific patient you would want to gather more information about their clinical background with further questions – e.g. type of epilepsy, any associated medical conditions etc. The rest of the questions below assume that the GP has a specific patient in mind.
(b) What medication is the patient taking currently?
Presumably there is antiepileptic medication but there could be other drugs, any of which might interact with an antidepressant and so affect choice.
(c) Which antidepressant did you have in mind?
It is helpful to know what antidepressant the GP would ideally like to use. This makes searching for data to support safety easier. It enables you to concentrate on one antidepressant or one class of antidepressant instead of having to look at them all. In asking this question it is assumed that it would prompt the GP to tell you what he or she has already tried (if anything). If this information is not forthcoming, then you would also need to ask this question in case an antidepressant has been already tried unsuccessfully or has been suspected of causing fitting in the past.
(d) Ask about medical history and other medication
Check for contraindications/cautions and potential interactions.

Suggested sources:

- Psychotropic Drug Directory, Maudsley Guidelines, SmPCs, Stockley's Drug Interactions.
- There is some guidance on the scenario on the SPS website, but check if you have any local guidelines too.