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SURGICAL TALK

There is no doubt that the best performers in finals are those candidates who think logically, express themselves clearly and avoid putting their foot in their mouth by saying something stupid. Their depth of knowledge is not necessarily greater than that of their fellow candidates, but they do well in every part of the exam — writtens, clinicals and the viva. The message is clear: you must start early, practising a systematic approach to the subject. In this chapter several examples of such approaches are given. You may not like all of them, so choose a method that you can use and spend a great deal of time perfecting it. Also, note that a short pause before answering does not detract from the answer and may avoid a dreadful mistake.

Remember also that in finals the examiners are looking for a minimum standard across the breadth of medicine and surgery. Effectively, they wish to assess whether you will be safe as a house officer subsequently. They will not be impressed by superb knowledge in one area if there is ignorance about basic facts in another. You will not be expected to know the technical details of any particular operation but should have an understanding of the broad principles and common complications that would be explained to the patient. An example question might be, ‘What would you say to the patient when consenting him for this operation?’ If you did not know that there were two incisions or that there was a high chance of needing a colostomy, then how could you be expected to inform the patient correctly?

It follows that it is in your best interest to make sure that you know the essential basics about all relevant topics before attempting to learn some topics in greater detail. It is also a basic fact of human psychology that,

when revising, students tend to revise more often the areas they feel comfortable about. In fact it is the areas you feel uncomfortable about that you need to spend time on. To avoid leaving gaps in your revision take the chapter headings of your surgical textbook and make sure that you feel you could give a short summary of the basic points in each chapter. If you cannot say much about a particular subject (and would dread being asked about it in finals), then that is your most urgent revision priority — do not leave it to chance.

SURGICAL SIEVES

Sometimes you are asked an obscure question, which throws you. Your mind goes blank, you blurt out the first thing that comes into your head, and you end up in a deep hole. Afterwards you often realise that you did know the answer, or at least some of it. A sieve allows you to gather your thoughts, working from first principles, and come up with at least some sensible statements. When you answer a question, you should really talk about the most common things first and the rarities at the end, and one disadvantage of using a sieve is that you may not be able to rapidly reorganise your thoughts in this way, but still it is useful when all else fails and is invaluable in essay writing.

The Aetiological Sieve

- Congenital
- Acquired
 - Traumatic
 - Inflammatory (physical, chemical, infective)
 - Neoplastic (benign or malignant, primary or secondary)
 - Circulatory
 - Autoimmune
 - Nutritional
 - Metabolic
 - Endocrine

- Drugs
- Degenerative
- Iatrogenic
- Psychosomatic

TIN CAN MED DIP is one way of remembering it, but you probably have your own method.

The Anatomical Sieve

This can apply to anatomical sites, structures or tissue types. If asked ‘What are the causes of mechanical bowel obstruction?’, you could say ‘Adhesions.’ This is a correct answer but an incorrect way of saying it. Start by saying that the bowel is a structure consisting of several anatomical regions and hence obstruction can occur anywhere along its length, for example, stomach outflow obstruction, small bowel obstruction and large bowel obstruction. The examiner will then usually pick one route and lead you along it. If writing an essay, you obviously need to discuss all three. Then, add that the bowel is a hollow tube, and like any hollow tube (cf. ureters) it can become blocked at three sites: from outside the tube pressing in (extramural), within the wall of the tube (intramural) and within the lumen of the tube (luminal). Where appropriate, answers should be structured in this way.

Causes of Mechanical Bowel Obstruction

<i>Extramural</i>	<i>Intramural</i>	<i>Luminal</i>
Adhesions	Tumours	Impacted faeces
Strangulated hernia	Infarction	Foreign body
Volvulus	Strictures	Large polyps
Extrinsic compression	Inflammation (e.g. Crohn’s)	Intussusception

Do not forget that there are other structures such as muscle, bone, joints and nerves in the region, but in this case these would rarely be the cause.

If possible, when listing differential diagnoses try to do so in the order of their likelihood (i.e. do not mention vanishingly rare things before common things).

General and Specific

‘Tell me about postoperative complications.’ When asked such a question it is difficult to know where to start. As before, you must avoid saying the first thing that comes into your head, as this may not be the most relevant. Here, we can use two types of classification: one applies to the type of complication, and the other gives a time scale.

Postoperative complications can be *generalized*, i.e. applying to any operation (such as the effects of anaesthesia), or *specific*, i.e. applying to a particular operation (such as damage to the recurrent laryngeal nerve in thyroidectomy).

Once classified into general and specific the complications can be broken down further into time scales. These complications can be *immediate*, *early* or *late* (see chapter on pre- and postoperative complications for further details).

Once you use these principles, it becomes easy to answer most questions logically. For example: ‘What are the causes of haematuria?’ The causes can be *generalized* (e.g. a bleeding disorder or use of anticoagulants) or *specific*, relating to any of the *anatomical structures* in the region. The following structures (starting from the top) are part of the urinary tract:

<i>Structure</i>	<i>Causes</i>
Kidney	Stones, trauma, carcinoma (use the aetiological sieve)
Ureter	Tumours, stones, infection
Bladder	Infection, tumour, stones
Prostate	Benign hypertrophy, tumour, infection
Urethra	Stone, infection, trauma, etc.

NB. Confirm true haematuria, since the appearance of red urine can occur following beetroot ingestion or with certain drugs such as rifampicin. Also, exclude bleeding from the vagina or anus.

Tissue Types

Try to list the causes of a lump in the groin. It is difficult to be exhaustive is it not? A good method is to use tissue types, i.e. say that this lump can arise from any of the tissue types in this region. For example:

<i>Tissue type</i>	<i>Example</i>
Skin	Sebaceous cyst
Adipose tissue	Lipoma
Connective tissue	Fibroma
Lymphatics	Enlarged lymph node
Blood vessels	Saphena varix, femoral artery aneurysm
Inguinal canal	Inguinal hernia, hydrocoele of the cord
Femoral canal	Femoral hernia
Testes	Undescended testes

Investigations

Always break down investigations in the following manner:

1. *Simple urine and faecal tests* (e.g. urine dipstix, microscopy and culture, pregnancy tests, faecal occult blood)
2. *Haematological tests* (routine, e.g. FBC, or special, e.g. tumour markers)
3. *Radiological tests* (e.g. CXR, ultrasound or CT)
4. *Special investigations* (e.g. gastroscopy, V/Q scans)

It is easy to shout out ‘Full blood count’, ‘Chest X-ray’ or ‘Calcium’ as an answer to the question ‘How would you investigate such a patient?’ However, if you think of and give the above answers every time you are asked such a question, going through the categories one by one, you will never leave out something by mistake. You may be asked to justify your

choice of investigation. Often we send off investigations as a baseline since the patients are being admitted to hospital. This is justified in the elderly but is usually a waste of resources in young, fit patients. A full blood count is justified in young females, to check for anaemia. U & Es should be sent for patients on diuretics.

Management

‘Discuss the treatment of benign prostatic hypertrophy’ is a different question from ‘Discuss the management of benign prostatic hypertrophy.’ In the former the examiners want you to purely concentrate on treatment and not on diagnosis. In your answer you should define BPH (benign prostatic hypertrophy) and perhaps say one or two sentences on the condition and its investigation, but do not spend too long on this as you will get no extra marks. Management involves discussing all of the steps that deal with a clinical problem, including the history, examination, investigations, formation of a diagnosis and treatment.

When discussing treatment you can again break down your answer into subheadings. For example: treatment can be conservative, medical or surgical. For example, in this case:

Conservative. This usually means ruling out cancer. A prostate specific antigen (PSA) <4 and a normal examination would help the doctor reassure the patient and a policy of watchful waiting may be adopted until the symptoms get worse.

Medical. For example, drugs such as $\alpha 1$ -adreno-receptor blockers or 5- α -reductase inhibitors.

Surgical. For example, trans-urethral resection of the prostate (TURP).

Answering an Essay

Essay questions nowadays are not common, but if they do feature tend to be quite generalized; for example, ‘Minimal access surgery — discuss.’ There will, however, always be the odd question based on a detailed knowledge of one condition.

The following is a guide for the headings you can use in writing such an essay; some surgeons refer to this as the pathological sieve.

- Definition
- Aetiology (incidence, age, sex, geography)/risk factors
- Histology (macro and micro)
- Clinical features (signs and symptoms)
- Diagnosis (and differential)
- Clinical staging (if appropriate)
- Investigations/treatment/management
- Complications
- Prognosis

Remember that management depends on diagnosis and that diagnosis depends on history, examination and special investigations. Therefore ‘management’ refers to all of the steps of clinical assessment and investigation as well as treatment.

Never forget the steps of management which occur early on as the patient is being admitted to hospital. For example, if asked how you would manage a case of acute cholecystitis, you need to say that you would give the patient adequate analgesia, arrange admission to a surgical bed, put up a drip, keep nil by mouth, etc., before talking about liver function tests or ultrasound scans (which would not normally be available immediately). It is often a good idea to try and imagine that you are actually the doctor in A & E who is trying to sort the patient out. What would you actually do? What observations would you ask the nurses to take? When would you review the patient? Would you inform someone more senior? Would you put in a urinary catheter, etc.? By mentioning such points you not only increase the content of your answer, you also demonstrate that you have become aware of the practical aspects of being a junior doctor as well as of the textbook theory.

As part of your management add the word ‘POSSET’ at the end of an essay if appropriate — *Physio*, *Occupational therapy*, *Specialists* (e.g. stoma care, breast care, speech therapists), *Social workers*, *Education* and *Terminal care*. The last two are of the utmost importance. Education

involves explaining things like when the stitches will come out, what you can and cannot do (such as when you can drive, have sex), etc. Terminal care means involving the Macmillan Nurses, arranging the syringe pump to deliver analgesia, speaking to the GP, etc. This last paragraph can be the difference between a good essay and an excellent one.

History of a Lump

Surgery is full of lumps. No matter where the lump is, there are only five questions you need to remember when taking the history of a lump:

- When and how did you first notice the lump?
- How has the lump changed since you first noticed it?
- What symptoms does it cause you?
- Have you got any more or have you had this before?
- What do you think it is?

You *must* learn this list. These are the vital questions and they apply to any lump, whether it be in the neck, in the breast or in the groin.

For example, was it *noticed* incidentally, whilst looking in the mirror, or did your partner point it out to you? Remember — this is when the lump was first noticed and not when it first appeared! *How has it changed?* Has it got bigger, smaller, stayed the same size, or has it come and gone? Has it changed its appearance and consistency, does it get bigger during a period? *What are the symptoms?* Is it painful? (Patients often wrongly equate this to cancer.) Symptoms usually are related to anatomical site. For example, in breast lumps, is there a nipple discharge? A lump in the neck could affect voice, respiration or eating. If you think this is a thyroid lump, ask relevant questions about hypo- or hyperthyroidism.

Have you got any more/had it before? If the patient has many lumps, are they the same? If he has had this before, what happened to it the last time, and what did the doctor say it was? Does it come periodically (for example, with every menstrual cycle)?

What do you think it is? This is an important question, since the answer may be ‘Cancer, doctor.’ You are then aware of the patient’s anxieties. You may

be able to reassure the patient even if you do not know the exact diagnosis. For example, you may be able to reassure a 20-year-old girl with a painful breast lump that breast cancer is rare at her age and usually is not painful, etc.

History of a Pain

Again, there are only a few questions you need to remember:

- Where is the pain?
- What is the nature of the pain?
- How did the pain start and what has happened to it since?
- What relieves and what exacerbates the pain?
- Are there any associated symptoms?
- Have you ever had this before? Previous history.
- What do you think it is?

As seen with the history of a lump, this set of questions can apply to any pain, whether cardiac in origin or due to appendicitis.

Site. Remember that visceral pain is referred along the somatic nerves; for example, diaphragmatic irritation is felt at the shoulder, and early appendicitis is felt around the umbilicus.

Nature. This includes character, severity and radiation. Colicky pains feel like the contents of a tube are being squashed or pushed forward. They originate from a hollow viscus, and usually come and go in a regular pattern. Severity is difficult to standardise, since everyone has a different threshold of pain, but saying something like ‘The pain is worse than labour pains’ or ‘This is the worst pain they have ever had’ is often helpful.

What has happened to the pain? This includes onset, progression and end. Was the onset sudden or gradual? Has the pain got better or worse since it started? Does it come and go? How is it now compared to when it started? It is sometimes helpful to get the patient to draw a graph of the pain against time.

Aggravating or relieving factors. Asking the patient for aggravating or relieving factors often leads to a blank and you may have to ask more

direct questions in this context. For example, ‘Does the pain want to make you writhe about or lie very still?’ Classically, colicky pains make you move about trying to get comfortable, whereas if there is inflammation involving the peritoneum, then moving about makes the pain worse. This distinction is helpful in differentiating biliary colic, where the patient may be moving about during an episode, from cholecystitis, where the patient will tend to lie still.

Associated symptoms. Again, this will depend on the cause and site of the pain. For example, nausea, vomiting and signs of sympathetic stimulation all go with cardiac pain. Anorexia, weight loss, change in the bowel habit and, perhaps, rectal bleeding would be suggestive of a bowel cancer, etc.

Past history. If the patient has had this pain before he can usually tell you if this feels the same as the last episode — for example, an alcoholic with repeated episodes of acute pancreatitis or the angina sufferer, with an MI. Ask about the past medical history and what drugs the patient is taking.

Answering a Question

By the time finals come along, almost everyone knows how to answer a viva question with the boring words ‘I would take a thorough history, examine the patient and investigate according to my findings ...’ The examiner hears this statement time after time, and when the candidate cannot back it up with something more substantial, the examiner rightly becomes annoyed. A better approach which will make you stand out from the rest of the candidates is to apply your answer directly to the question. So, if, for example, you are asked how you would manage someone with a breast lump, you could say, ‘In my history I would find out about the history of the lump and ask in particular for risk factors for breast cancer or for factors suggestive of benign breast disease On examination I would inspect the breasts, followed by palpation, examining the normal side first, etc. ... My investigations would then be tailored to my findings from the history and examination, but should involve an imaging technique plus or

minus a fine needle aspiration. The patient would then require counselling about the disease, and treatment could be divided into medical and surgical options (which can be subdivided into curative and palliative).’

This is not meant to give you the full answer — it only highlights the approach you would use (the correct answer is in the chapter on breast surgery). It is clear that this answer shows that you are thinking properly and not merely giving stereotypical responses. If the examiner wants to test you further he may then go on, ‘Good, so tell me what questions you would like to ask in taking the history of this lump?’ or ‘What are the risk factors for breast cancer?’ This way, you are forcing the examiner into asking you questions that you want to hear, and hence you are always one step ahead. Likewise, if the examiner asks you for the complications of thyroidectomy, do not spend too much time on the general complications; rather, use perhaps a simple sentence like ‘Any operation has both general and specific complications and each can be divided into immediate, early and late. The specific complications of thyroidectomy are ...’ If he wishes to know the general complications he can then ask you — this way, it shows that you understand the question being asked.

It may be possible to give an adequate performance even when you are unsure of the exact diagnosis. A clear history or good clinical examination technique will go a long way towards persuading the examiners that you should pass. Often, if you have accurately reported the history and physical signs, the examiners will give you a hint towards the correct diagnosis if you do not get it immediately.

