

Surgical strategy

Learning objectives

- ✓ To understand the principles of taking a clear history, performing an appropriate examination, presenting the findings and formulating a management plan for surgical diagnosis.
- ✓ To understand the common nomenclature used in surgery.

Students on the surgical team, in dealing with their patients, should recognize the following steps in their patients' management.

- 1 *History taking.* Listen carefully to the patient's story.
- 2 *Examination of the patient.*
- 3 *Writing notes.*
- 4 *Constructing a differential diagnosis.* Ask the question 'What diagnosis would best explain this clinical picture?'
- 5 *Special investigations.* Which laboratory and imaging tests are required to confirm or refute the clinical diagnosis?
- 6 *Management.* Decide on the management of the patient. Remember that this will include reassurance, relief of pain and, as far as possible, allaying the patient's anxiety.

History and examination

The importance of developing clinical skills cannot be overemphasized. Excessive reliance on special investigations and extensive modern imaging (some of which may be quite painful and carry with them their own risks and complications) is to turn your back on the skills necessary to become a good clinician. Remember that the patient will be apprehensive and often will be in pain and discomfort. Attending to these is the first task of a good doctor.

The history

The history should be an accurate reflection of what the patient said, not your interpretation of it. Ask open questions such as 'When were you last well?' and 'What happened next?', rather than closed questions such as 'Do you have chest pain?'. If you have a positive finding, do not leave the subject until you know everything there is to know about it. For example, 'When did it start?'; 'What makes it better and what makes it worse?'; 'Where did it start and where did it go?'; 'Did it come and go or was it constant?'. If the symptom is one characterized by bleeding, ask about what sort of blood, when, how much, were there clots, was it mixed in with food/faeces, was it associated with pain? Remember that most patients come to see a surgeon because of pain or bleeding (Table 1.1). You need to be able to find out as much as you can about these presentations.

Keep in mind that the patient has no knowledge of anatomy. He might say 'my stomach hurts', but this may be due to lower chest or periumbilical pain – ask him to point to the site of the pain. Bear in mind that he may be pointing to a site of referred pain, and similarly do not accept 'back pain' without clarifying where in the back – the sacrum, or lumbar, thoracic or cervical spine, or possibly loin or subscapular regions. When referring to the shoulder tip, clarify whether the patient means the acromion; when referring to the shoulder blade, clarify whether this is the angle of the scapula. Such sites of pain may suggest referred pain from the diaphragm and gallbladder, respectively.

It is often useful to consider the viscera in terms of their embryology. Thus, epigastric pain is generally from foregut structures such as the stomach,

Table 1.1 Example of important facts to determine in patients with pain and rectal bleeding

Pain	Rectal bleeding
Exact site	Estimation of amount (often inaccurate)
Radiation	Timing of bleeding
Length of history	Colour – bright red, dark red, black
Periodicity	Accompanying symptoms – pain, vomiting (haematemesis)
Nature – constant/colicky	Associated features – fainting, shock, etc.
Severity	Blood mixed in stool, lying on surface, on paper, in toilet pan
Relieving and aggravating factors	
Accompanying features (e.g. jaundice, vomiting, haematuria)	

duodenum, liver, gallbladder, spleen and pancreas; periumbilical pain is midgut pain from the small bowel and ascending colon, and includes the appendix; suprapubic pain is hindgut pain, originating in the colon, rectum and other structures of the cloaca such as the bladder, uterus and Fallopian tubes (Figure 1.1). Testicular pain may also be periumbilical, reflecting the intra-abdominal origin of these organs before their descent into the scrotum – never be fooled by the child with testicular torsion who complains of pain in the centre of his abdomen.

The examination

Remember the classic quartet in this order:

- 1 inspection;
- 2 palpation;
- 3 percussion;
- 4 auscultation.

Learn the art of careful inspection, and keep your hands off the patient until you have done so. Inspect the patient generally, as to how he lies and how he breathes. Is he tachypnoeic because of a chest infection or in response to a metabolic acidosis? Look at the patient's hands and feel his pulse. Asking him to walk may be revealing in someone with claudication, or in assessment of general fitness.

Only after careful inspection should you proceed to palpation. If you are examining the abdomen, ask the patient to cough. This is a surrogate test of rebound tenderness and indicates where the site of inflammation is within the peritoneal cavity. Remember to examine the 'normal' side first, the side that is not symptomatic, be it the abdomen, hand, leg or breast. Look at the patient while you palpate. If there is a lump, decide which anatomical plane it lies in. Is it in the skin, in the subcutaneous tissue, in the muscle layer or, in the case of the abdomen, in the underlying cavity? Is the lump pulsatile, expansile or mobile?

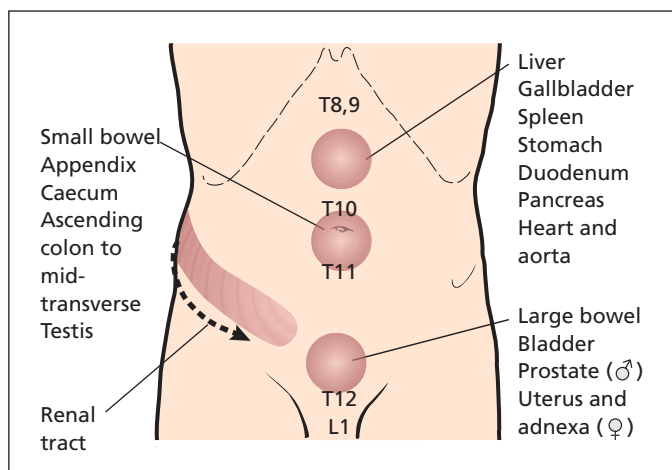


Figure 1.1 Location of referred pain for the abdominal organs.

Writing your notes

Always write up your findings completely and accurately. Start by recording the date and the time of the interview, and check that the patient's name is at the top of the page and that these are the correct set of notes. Write all the negative as well as positive findings. Avoid abbreviations since they may mean different things to different people; for instance, PID – you may mean pelvic inflammatory disease but the next

person might interpret it as a prolapsed intervertebral disc. Use the correct surgical terminology (Table 1.2).

Illustrate your examination unambiguously with drawings – use anatomical reference points and measure the diameter of lumps accurately. When drawing abdominal findings, use a hexagonal representation (Figure 1.2). A continuous line implies an edge; shading can represent an area of tenderness or the site where pain is experienced. If you can feel all around a lump, draw a line to indicate this; if you can feel only the upper margin, show only this. Annotate the drawings

Table 1.2 Common prefixes and suffixes used in surgery

Prefix	Related organ/structure
angio-	blood vessels
arthro-	a joint
cardio-	heart
cholecysto-	gallbladder
coelio-	peritoneal cavity
colo- and colon-	colon
colpo-	vagina
cysto-	urinary bladder
gastro-	stomach
hepato-	liver
hystero-	uterus
laparo-	peritoneal cavity
mammo- and masto-	breast
nephro-	kidney
oophoro-	ovary
orchid-	testicle
rhino-	nose
thoraco-	chest
Suffix	Procedure
-centesis	surgical puncture, often accompanied by drainage, e.g. thoracocentesis
-desis	fusion, e.g. arthrodesis
-ectomy	surgical removal, e.g. colectomy
-oscopy	visual examination, usually through an endoscope, e.g. laparoscopy
-ostomy	creating a new opening (mouth) on the surface, e.g. colostomy
-otomy	surgical incision, e.g. laparotomy
-pexy	surgical fixation, e.g. orchidopexy
-plasty	to mould or reshape, e.g. angioplasty; also to replace with prosthesis, e.g. arthroplasty
-rrhaphy	surgically repair or reinforce, e.g. herniorrhaphy

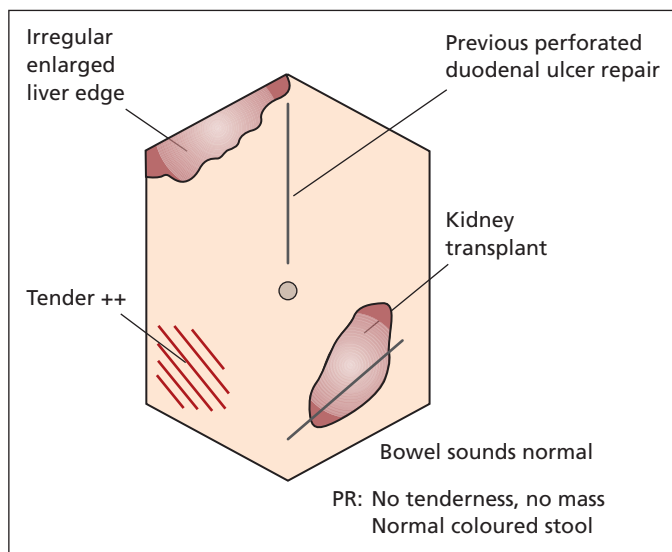


Figure 1.2 Example of how to record abdominal examination findings.

with your findings (see Figure 1.2). At the end of your notes, write a single paragraph summary, and make a diagnosis or write down a differential diagnosis. Outline a management plan and state what investigations should be done, indicating which you have already arranged. Sign your notes and print your name, position and the time and date legibly underneath.

Case presentation

The purpose of presenting a case is to convey to your colleagues the salient clinical features, diagnosis or differential diagnosis, management and

investigations of your patient. The presentation should not be merely a reading of the case notes, but should be succinct and to the point, containing important positive and negative findings. Do not use words such as 'basically,' 'essentially' or 'unremarkable,' which are padding and meaningless. Avoid saying that things are 'just' palpable – either you can feel it or you cannot. Make up your mind. At the end of a good presentation, the listener should have an excellent word picture of the patient and his/her problems, what needs to be watched and what plans you have for management.