Date of admission: When did he/she get admitted to the hospital?

This is for record purposes.

- Did he/she get admitted from outpatient department (OPD) which means it is an elective case.
- Did he/she get admitted through casualty which means it must have been an emergency situation.
- Does he/she have any records from referring hospital—if so, please make a note of it and get more details.

SUMMARY

After getting all this information, please summarise and present the case. One example is given below:

Mr Gangadhar, a 35-year-old male patient, a teacher by occupation, coming from Manipal, presented to the outpatient department with the following complaints.

COMPLAINTS

Every complaint is important. All complaints must be listed in the *chronological* order, i.e. every disease starts with certain complaints. Hence, whichever complaint appeared first has to be mentioned first. A few examples are given below.

Example 1: Thyroid swelling (Fig. 1.1)

1. Swelling in front of the neck—5 years
2. Palpitation since 3 months

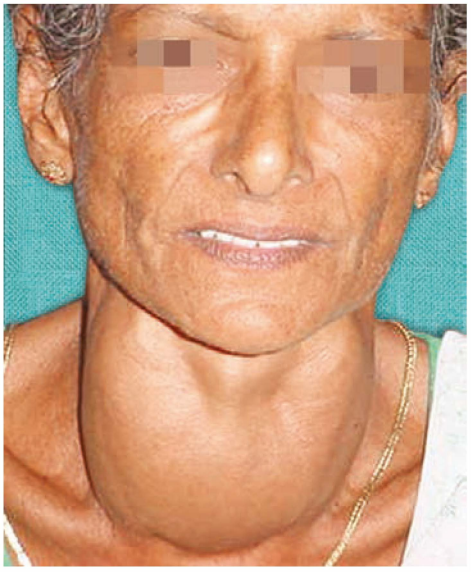

Fig. 1.1: She was a 48-year-old lady who had multinodular goitre of 10 years duration. She also had palpitations

Analysis of the complaints: Swelling is of 5-year duration—it means it is likely to be a benign lesion. It is in front of the neck—so, most probably it is a thyroid swelling.

Patient has developed palpitations since 3 months: It means thyroid gland is producing more hormones. Hence, toxic features have developed in this swelling—hence the case is mostly toxic goitre.

Example 2: Ulcer over leg in a 50-year-old diabetic man

1. Ulceration in the sole of the foot—6 months
2. Swelling in the groin—10–15 days

Analysis of the complaints: Ulcer in the leg started first. This may be malignant as in squamous cell carcinoma or malignant melanoma (skin cancers) and the groin swelling could be metastasis in lymph nodes. In case the ulcer is benign such as trophic ulcer (diabetic foot), the groin swelling may be due to lymph node enlargement due to secondary infection.

Example 3: Case of dysphagia in a 75-year-old man

1. Difficulty in swallowing—3 months
2. Swelling over neck—15 days

Analysis of the complaints: Difficulty in swallowing is dysphagia. This started first and could be due to some lesion in the posterior third of the tongue, oropharynx or oesophagus. This was followed by swelling in the neck, most likely due to metastasis in a lymph node.

Example 4: Case of mass in the epigastrium (upper abdomen) in a 50-year-old man

1. Early satiety, loss of appetite since 2 months
2. Vomiting since 10 days
3. Swelling on the left side of the neck since 3 days.

Analysis of the complaints: With the first complaints, he may be having some malignancy in the upper abdomen mostly carcinoma stomach. Vomiting indicates obstruction, may be in the pylorus. Hence, it may be carcinoma antrum of the stomach. Swelling in the left supraclavicular region is most likely due to lymph node enlargement. (Enlarged supraclavicular lymph node in malignancies is called Virchow's node.) Thus, the case may be advanced carcinoma stomach with lymph node metastasis.

3. ***Build and nourishment***: Average build indicates adequate nutrition. Poor nutrition indicates malnutrition or chronic diseases such as tuberculosis, uncontrolled diabetes or carcinoma.
   - A patient with a tall build and marfanoid features may be having medullary carcinoma of the thyroid.
   - Interestingly varicose veins of the leg are common in tall and obese patients.
   - Short built—dwarfism can be due to various causes specially endocrinal as in hypopituitarism.
   - Assessment of the nourishment is done by calculating body mass index (BMI). It is easy, simple and reliable method.

$$\text{BMI} = \frac{\text{Body weight in kilograms}}{\text{Height in square metres}}$$

   Accordingly, patients can be classified as:

   a. Underweight = Less than 18.5 kg/m^2

   b. Normal weight = 18.5 to 25 kg/m^2

   c. Overweight = 25 to 30 kg/m^2

   d. Obese = Over 30 kg/m^2

   - Some changes will indirectly reflect on nutritional status. They are wasting of muscles, flat nails, angular cheilitis, skin changes, thinning or loss of hair, dementia, neurological changes, etc.

4. ***Anaemia***: Anaemia refers to decreased haemoglobin or circulating red blood cells and manifests as pallor. Look at the conjunctiva and look for anaemia. Anaemia may be because of nutritional cause, blood loss from gastrointestinal tract or due to chronic diseases including tuberculosis or carcinoma. Pallor refers to pale skin and conjunctival discolouration.
   - Mucous membrane is the ideal site to look for pallor (oral mucosa and tongue).
   - Lower eyelid is turned down to look for conjunctival pallor (Fig. 1.10).

   There are many causes of low haemoglobin.

   A. ***Gastrointestinal tract bleeding***: Common causes are chronic duodenal ulcer, chronic gastric ulcer, portal hypertension, haemorrhoids, etc. Carcinoma stomach and carcinoma caecum are notorious that sometimes they present with anaemia due to occult blood loss and iron deficiency anaemia.

   B. ***Malignant tumours***: The occurrence of anaemia can be the first diagnostic clue to suggest a malignant disease, and is **present in more than 30% of cancer patients.**

Fig. 1.10: Gross pallor: Patient had carcinoma caecum

   - ***Invasion of bone marrow***: Certain cancers, such as leukaemias, lymphomas, myeloma, carcinoma breast and prostate, invade the bone marrow. The bone marrow contents decrease or change due to accumulation of abnormal amyloid protein, necrosis (dead tissue) and fibrosis leading to anaemia.
   - ***Cancer and immune response***: This immune response results in the secretion of proteins called **cytokines** that serve a signaling function between components of the immune system. *These cytokines appear to reduce the production of some haematopoietic growth factors, notably erythropoietin,* and can *impair the bone marrow* response to erythropoietin.
   - ***Carcinoma and bleeding***: Carcinoma stomach, carcinoma caecum, carcinoma rectum, and renal cell carcinoma also give rise to bleeding resulting in anaemia.
   - ***Cancer treatment***: Surgery, radiotherapy, chemotherapy with a single drug or in combination will give rise to anaemia.

   C. ***Nutritional deficiencies***: Iron, B_{12} or folic acid.

   D. ***Haemolysis***: Haemolytic anaemias, which present as splenomegaly, mild icterus and anaemia, are classical examples encountered in the surgical ward.

5. ***Icterus***: Yellowish discolouration of sclera, skin, and mucous membranes indicates jaundice. In obstructive jaundice, sclera can occasionally have deep yellow or even greenish hue due to oxidation

Teeth may fall off spontaneously, if there is expansion of the mandible or destruction of the mandible as in osteomyelitis or malignancies infiltrating the mandible. Dentigerous cyst arises from unerupted permanent tooth.

- Examine the tongue, buccal mucosa and lips especially for any nonhealing ulcers which suggest malignancy.

11. ***Pedal oedema*:** Pitting refers to depression created by the pressure of the finger over the oedematous part. It is checked in the lower third of the medial side of the leg (Figs 1.19 and 1.20).

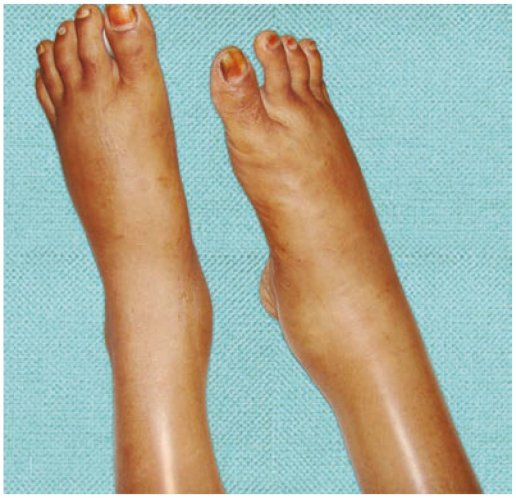

Fig. 1.19: Bilateral pedal oedema—a case of severe hypoproteinaemia in nephrotic syndrome

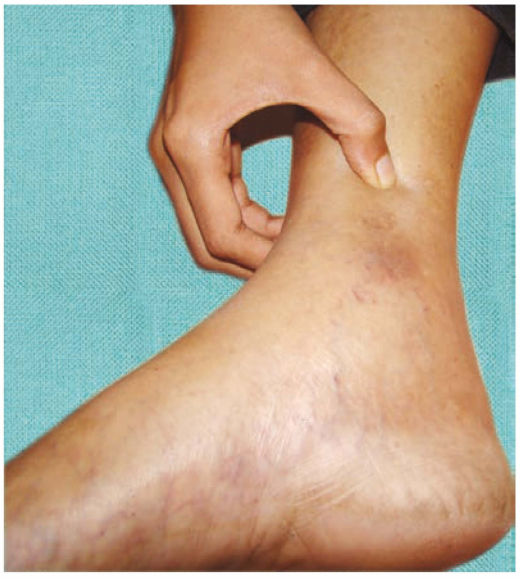

Fig. 1.20: Pitting test to check for oedema of leg

12. ***Spinal tenderness*:** This is specially highlighted in Indian cases because Pott's spine or tubercular (TB) spine is a common problem. Tenderness over the spine is one of the common signs of the TB spine. It is elicited by exerting firm pressure over the *lateral aspect of the spinous process* of the vertebrae—and rotation of the vertebral body results in pain. *Kyphotic deformity of the 2 or 3 vertebrae* together is called *gibbus. Deformity of one vertebra is called knuckle.*

- Tenderness is also a feature in old fracture spine.
- Spine is one of the common sites of metastasis from haematogenous spread. A few examples are—carcinoma breast, carcinoma prostate, renal cell carcinoma, lymphoma, and multiple myeloma (Clinical Box 1.2).

Clinical Box 1.2

Spine metastasis

- Breast
- Prostate
- Kidney
- Multiple myeloma

Skull metastasis: Follicular carcinoma thyroid in women

13. ***Pulse*:** More details on the pulse are given in medicine books. However, relevant points for students of surgery have been given here.
    - Pulse volume is ***weak*** in peripheral vascular diseases such as TAO or atherosclerotic vascular diseases.
    - ***High volume*** pulse is seen in thyrotoxicosis
    - ***Low volume*** pulse is seen in hypotension, typically in haemorrhagic shock.
    - ***Tachycardia*** is a feature of thyrotoxicosis and many other medical conditions.
    - ***Bradycardia*** is seen in athletes.
    - Arterial wall ***thickening*** is seen in atherosclerotic vascular diseases.
    - ***Dancing brachialis*:** Thickened prominent pulsation of the brachial artery is suggestive of atherosclerotic disease. It is also called **locomotor brachialis** (Fig. 1.21).
14. ***Blood pressure*:** It should be made as a common practice to measure the blood pressure in all patients. More details are given in medicine books.
    - Hypertension should be controlled well before surgery to avoid complications such as cerebral haemorrhage or cardiac failure following the surgical procedure.

Clinical Box 1.4

Summary of Clinical Examination

- When you talk to the patient, be well prepared—do it with dignity. Explain what you are doing, why you are doing.
- It is important to realize that examiners expect students to conduct well and behave well with the patient
- Clinical examination should be complete—no short cuts. Even if a few findings are missed, it does not matter. What is important is that you have examined the relevant parts.
- Interpretation of the data should start from the time when you start taking history. It should continue at every level of examination and findings.
- When final diagnosis is given, mentally prepare yourself for possible questions such as—Why? What? How? What else?
- Give a common diagnosis first
- Rare diagnosis are rarely correct.
- Get ready with answers to the questions on investigations and treatment.
- Observe/watch carefully how a senior clinician examines the patient (Fig. 1.26)

called the 'working diagnosis' or simply diagnosis (Clinical Box 1.4).

- While giving the clinical diagnosis, common diagnosis has to be kept in mind. As the old saying goes, '*common things are common*'.
- It is important to realise that while giving a diagnosis you not only use your five senses properly but also use the most important 6th sense—**common sense**.
- While giving a diagnosis, first think of the anatomical diagnosis meaning which anatomical structure this is arising from, e.g. Is it from lymph nodes? thyroid gland? or submandibular salivary gland? stomach? or kidney? etc. Then consider what pathological condition is affecting this structure. Both combined together form the clinical diagnosis, e.g. tuberculous lymphadenitis, carcinoma parotid, carcinoma tongue, metastasis in cervical lymph nodes, carcinoma stomach, hydronephrosis, etc.
- **As far as possible, try to give one diagnosis:** It may not explain all physical signs and symptoms which is difficult in many situations. To give a few examples: A patient may have lymph nodes in the neck which are matted suggesting tuberculosis. He may also have a nonhealing lesion in the tongue which is indurated (hard). The diagnosis will be carcinoma tongue with metastasis in the lymph nodes rather than tuberculosis of the tongue with neck nodes (carcinoma tongue is more common than tuberculosis of the tongue).
- When there are multiple swellings or masses in the neck, lymph node swellings should be offered as the ***first diagnosis.***
- A lady has a thyroid swelling with another swelling in the scalp bone. ***The complete diagnosis*** is not just carcinoma thyroid but also with metastasis in the skull bone.

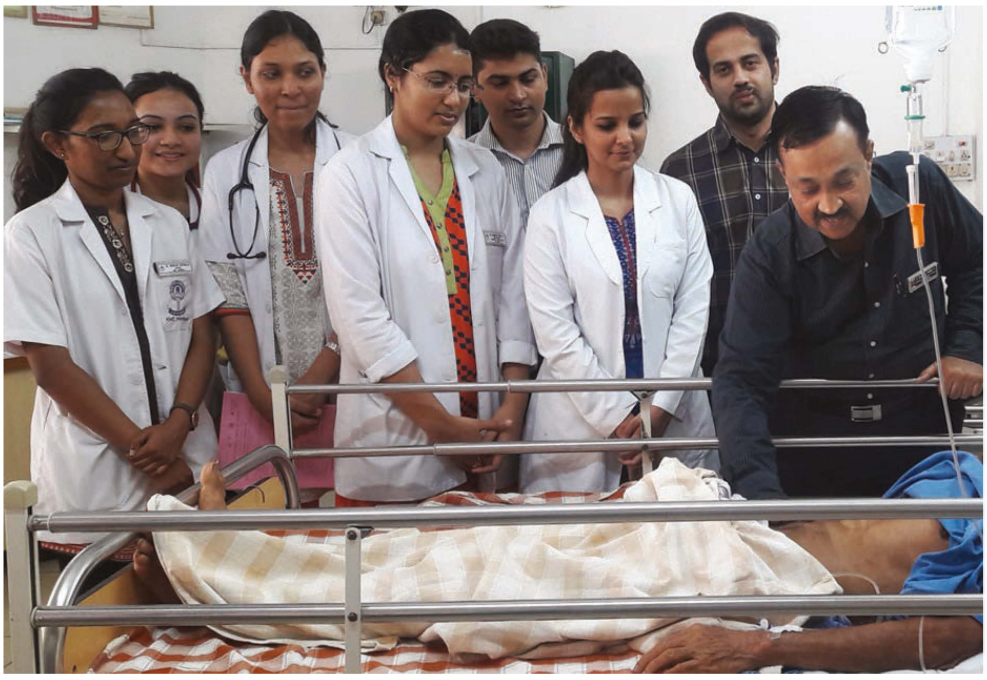

Fig. 1.26: Students can attain many skills by observing a clinician examining the patients