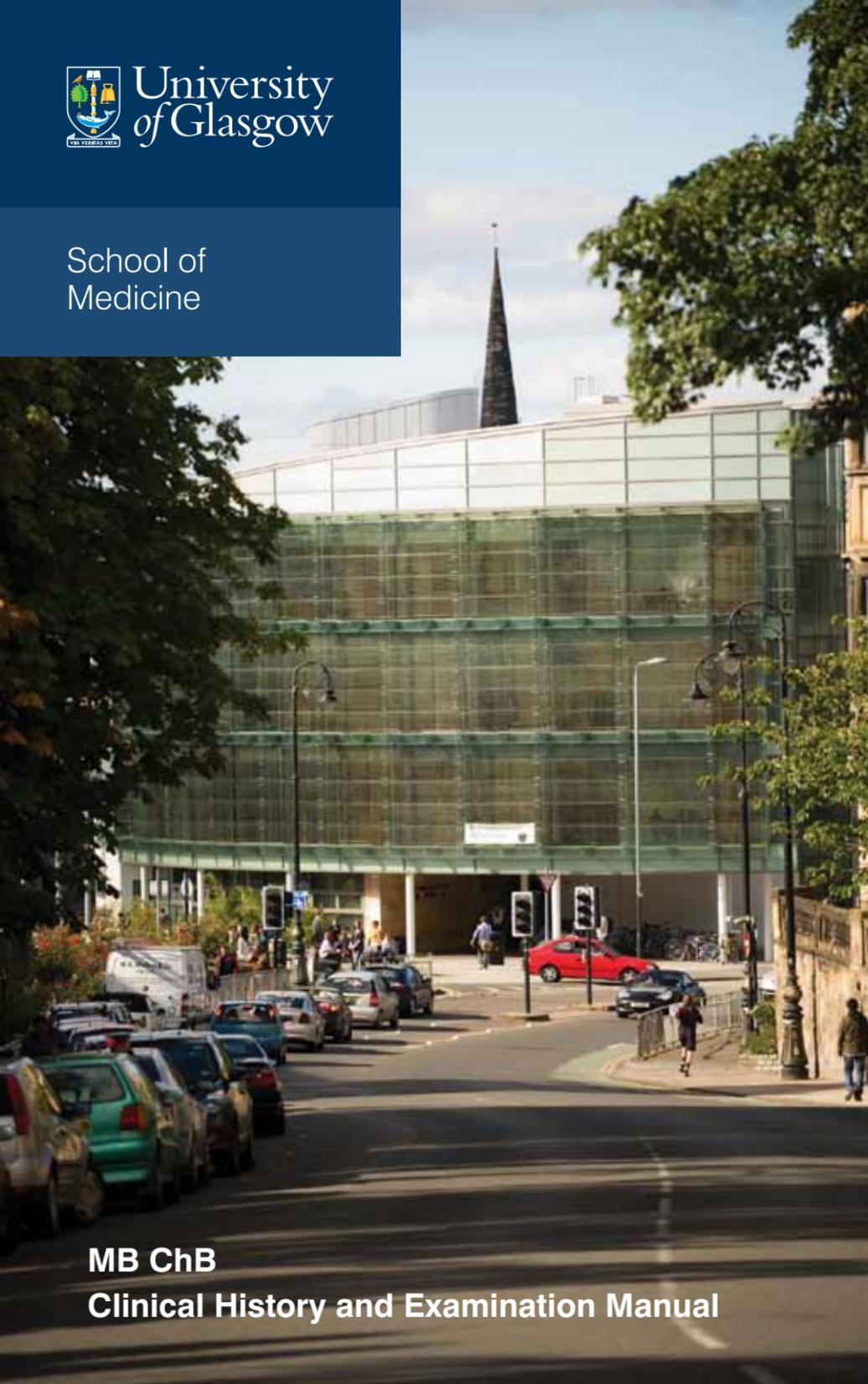




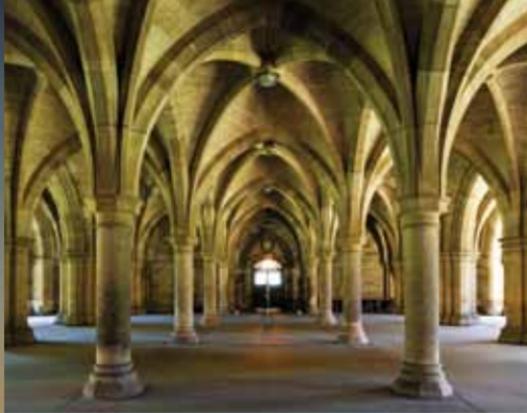
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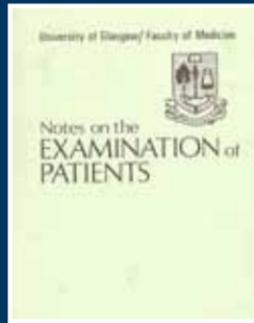
School of  
Medicine



**MB ChB**

**Clinical History and Examination Manual**





This is derived from the “Green Book”, a typewritten aide memoire for clinical examination well known to all Glasgow graduates.

It is intended as an aid to learning clinical history taking and examination, specifically in Phase 3 of the MB ChB curriculum - the first 15 weeks of Year 3. During that time, students will spend one full day per week in hospital or in General Practice. The hospital session should involve: (a) a session of bedside teaching, involving history taking and examination; (b) a case (either alone or in pairs) which should then be hand-written in the format at the end of this booklet; (c) presentation and discussion of the cases as a group. For the first few sessions it is expected that only parts of the history and examination will be covered but by the end of Year 3 all students should be proficient. Additional sections cover history-taking in psychiatry, obstetrics and gynaecology that are relevant later in the MB ChB programme.

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# Introduction

## The clinical manifestations of disease are:

Symptoms: Something the patient feels or observes themselves, which they regard as abnormal, e.g. pain, vomiting or weakness of a limb. These are discovered by taking a "history", which means a clinical "interrogation" or dialogue between doctor and patient.

Signs: Physical or functional abnormalities elicited by physical examination, e.g. tenderness, a swelling felt by palpation or a change in a tendon reflex.

# The Patient's problem

## Patients go to a doctor because -

- they are alarmed by their symptoms and believe themselves to be ill
- they seek an explanation of and relief of their symptoms
- they want to recover to their previous health as rapidly as possible, by adopting the treatment advised by their doctor and hope the cure will be a permanent one
- they and their relatives wish to know the probable course and outcome of the illness, the effectiveness of treatment available and whether any complications or sequelae will follow the disease.
- they need help and guidance in the management of chronic diseases.
- they require the interpretation of results.

## Caution:

Patients may be alarmed by use of common phrases that might be part of a junior student's differential diagnosis but are unlikely to apply to the individual being examined.

You should avoid use of words like 'cancer' or 'tumour' - using neoplasm or mitotic disease instead. Other avoidable terms and their suggested replacements would be AIDS / HIV ('retroviral infection'), enlarged heart ('Cardiomegaly'), enlarged liver ('hepatomegaly'), leukaemia ('white cell disorder').

# The Doctor's problem

The doctor wants to know the meaning of the patient's symptoms and of the signs which are elicited, in order to recognise the disease or diseases from which the patient is suffering (diagnosis). Knowledge of the disease and of its course in others allows the doctor to forecast the outlook (prognosis) and to prescribe treatment (therapy).

## Pre-symptomatic diagnosis:

In many patients the presence of disease may be detected as a result of population screening, or the targeted population of specific groups. This is a major role of General Practice in the UK and includes, for example, recording of blood pressure in all registered patients, cervical screening and breast screening of selected patient groups. Routine testing of patients with a family history, for example, of colonic carcinoma or adult polycystic kidney disease, is another strategy. Increasingly this may involve genetic testing.

Patients may also engage in screening at their own initiative, and often at their own cost. For example, patients may obtain a whole body CT scan or perhaps in the future, a whole genome scan and present with the results of the investigation. This is likely to increase in the future and produces challenges for clinicians.

## Diagnosis:

An interpretation of symptoms and signs leading to identification of a disease (or diseases). A complete description involves knowledge of the causation (aetiology) and of the anatomical and functional changes which are present.

It depends on the assembly of all the relevant facts concerning the past and present history of the illness, together with the condition of the patient, as shown by a full clinical examination. Simple laboratory tests, such as examination of the urine or estimation of the haemoglobin content of the blood, can be carried out by the doctor himself. For most patients referred to hospital, more elaborate special investigations are necessary, such as radiological examination and special biochemical investigations.

## Prognosis:

(outcome of an illness): This depends on the nature of the disease, on its severity and on the stage of the disease reached in the particular patient. It also depends on the constitution, occupation and economic status of the individual patient, as well as his motivation and ability to collaborate in treatment. Prognosis may be expressed statistically in terms of percentage chances of recovery or of death in acute illness, or of average expectation of life in chronic diseases. These estimates must be based on experience gained by the study of large numbers of comparable patients and must be applied with the greatest caution to individual patients.

## Syndrome:

A syndrome is a combination of symptoms and/or signs which commonly occur together, e.g. malabsorption syndrome, consisting of chronic diarrhoea with fatty stools and multiple nutritional deficiencies.

## **Patient Safety and Comfort**

History taking and physical examination can be a very exhausting experience for the patient. Remember, also, that the patient may already have been seen by other students. For these reasons it is essential, before taking a history or conducting a physical examination, to ask if the patient feels able and willing to cooperate. Throughout the examination the patient's comfort should be kept constantly in mind. Movement of the patient should be restricted as much as possible; for example when the patient is sitting forward the opportunity should be taken to palpate the neck, examine the chest posteriorly and look for sacral oedema and spinal deformity, e.g. kyphosis and scoliosis.

## **Note:**

If you retain a patient history, or submit it as a teaching case, it must not be identifiable to third parties. The patient's confidentiality must be retained.

Thus, it is common practice to use the initials and a Hospital Number When recorded in the Hospital Case record, the full details should be written down. In many hospitals, electronic records or admission pro-formas are used. However, all students should be able to take a full history and examination, and not to be reliant (or limited) to the use of electronic resources.

# History

## Source of history:

Name:

Age:

Hospital Number:

Occupation (including past occupations with dates):

Domicile (present and past):

Date of admission/ examination in case of out patients (to which all subsequent dates are related)

Marital status/ next of kin:

## Presenting Complaint:

PC: The PC should be given briefly in patient's own words, as far as possible. For example: "Chest Pain".

Duration: in hours, days, months or years, not "since 'Monday'" etc.

If more than one PC, enumerate in order of importance: (1); (2); (3)...

# History of Presenting Complaint (HPC)

## (a) General description

The taking of an accurate history is the most difficult and, in the majority of medical diseases, the most important part of a consultation. It becomes progressively simpler as the clinician's knowledge of disease and experience increases.

The history of the present condition may extend over days, weeks, months or even years and should be recorded chronologically. As far as possible, the patient's own account should be written down, unaltered by leading questions but phrased in medical terms. When the patient's own phraseology is used the words should be written in inverted commas, e.g. "giddiness", "wind", "palpitation" and an attempt should be made to find out precisely what they mean to the patient. The order of onset of symptoms is important. If there is doubt about the date of onset of the disease, the patient should be asked when he last felt quite well and why he first consulted his doctor. Dates may be quoted absolutely or relative to the date of writing e.g. five days ago; but if the latter system is used the date on which the history is written must be clearly shown. Notes of any treatment already received and of its effect, if any, must be made.

## (b) Symptomatic, or systematic enquiry

After the patient has given a general description of his illness, the system mainly involved will usually, but by no means always, be obvious. The patient should then be questioned about the main symptoms produced by diseases of this system. This should be followed by enquiries directed towards other systems. It should be remembered that the classification of symptoms by systems is one of convenience and is not absolute e.g. breathlessness may arise from disease of the cardiac, respiratory, renal or central nervous system. The following list of symptoms and suggested lines of questioning is not comprehensive and is intended as a simple guide for beginners. With experience, and specialist teaching, students will enhance and focus questioning for individual systems and presentations.

# Cardiovascular System

## Breathlessness

- on exertion only (noting degree of exertion)
- also at rest, if wakes at night (eg paroxysmal nocturnal dyspnoea, PND)
- duration, severity, precipitating factors, orthopnoea, number of pillows used

## Pain in chest

- onset - on exertion or at rest, or associated with activity, such as breathing or change in posture
- character - sharp, crushing or "tight"
- site
- radiation
- duration
- exacerbating and relieving factors (e.g. drugs such as GTN)
- accompanying sensations (e.g. breathlessness, vomiting, cold sweats, pallor, reflux, heartburn)
- precipitating factors - cold, heavy meal, emotion

## Oedema

- ankle swelling - time of day
- abdominal swelling - tightness of trousers or skirt

## Palpitation

- patient conscious of irregularity or forcefulness of heart beat
- character of palpitation – patients may tap out the rhythm

## Dizziness

- whether associated with change in posture, or palpitation
- whether true vertigo
- whether associated with collapse or loss of consciousness
- faints

## Peripheral vascular symptoms

- intermittent claudication – pain in the calves or buttocks on exertion, relieved by rest. Exercise limit, on flat ground and stairs.
- cold feet or hands – association with temperature. Associated cyanosis, pain or dysaesthesia (Raynaud's phenomenon).
- rest pain – pain in muscles or feet

# Respiratory System

## Cough

- duration
- character
- productive (of sputum) or not?
- frequency
- causing, or associated with, pain?
- associated with symptoms of infection?

## Sputum

- quantity
- colour
- type (frothy, stringy, sticky)
- when most profuse (during the day, night, the time of year and the effect of posture)
- presence of blood (haemoptysis) Is the blood red or brown? (i.e. fresh or old). Streaked with blood/ clots?
- Is it purulent?

## Breathlessness

- on exercise or at rest
- exercise limit – on flat, on stairs
- relationship with posture
- Diurnal variation

## Wheeze

- precipitating factors, (cough, fog, emotion, change of environment, contact with animals or birds, time of year)
- Diurnal variation

## Pain in chest

- site
- character
- relationship with respiration (pleuritic)?
- relationship with coughing?

## Hoarseness

- change of voice with or without pain
- duration?
- site of pain - pharynx or neck  
“Sore throat”

## Nasal discharge or obstruction

- one or both nostrils
- watery or purulent?
- blood (epistaxis), note – may result in haematemesis if blood swallowed

## Loss of weight

- time course
- appetite: food intake

## Sweating

- day or night
- requiring change of clothes?
- associated with other symptoms of infection?

## Smoking

- cigarettes, cigars?
- tobacco?
- duration (packets/day x years =  
PACK YEARS)

## Occupation

- high risk occupations – e.g mining, farming, shipyards
- type of dust? asbestos?  
duration

# Gastrointestinal System

## Abdominal pain

- duration
- character - burning, gnawing, colicky etc.
- site
- depth
- radiation
- frequency – continuous, periodic, continuous with exacerbations
- timing and association - nocturnal pain (awakening in early hours), relationship to eating
- aggravating and relieving factors – e.g. food, milk, alkalis, bowel action, posture
- relationship with micturition, retention of urine, menstrual cycle, menstruation
- remote or referred pain
- rectal pain
- back pain – pancreatic, adherent posterior peptic ulcer
- shoulder tip pain (due to diaphragmatic irritation) - gall bladder disease, perforation
- chest pain – oesophagitis
- headache – migraine, abdominal migraine

## Appetite

- loss of appetite - distaste disturbance for food (anorexia); “fear” of eating – pain, weight gain (anorexia nervosa)
- increased appetite – obesity, pregnancy, hyperthyroidism

## Difficulty in swallowing (dysphagia)

- duration - continuous or intermittent; progressive
- fluids or solids, or both?
- painful or painless?
- level at which food “sticks”
- nausea - continuous (e.g. hepatitis, pregnancy, uraemia); or intermittent
- related to food (type), e.g. neoplasm, gastritis, gallbladder disease (fatty foods)
- related to posture, e.g. labyrinthitis
- vomiting, preceded, or not, by nausea? (distinguishes gastric from cerebral vomiting, which is not preceded by nausea)
- character - small, repeated, projectile; related to food, pain, special foods

## Vomitus

- amount
- colour – clear, bile stained, coffee grounds, fresh blood
- content - undigested food (e.g. taken days or many hours before in pyloric obstruction)

## Belching

- eructation of gas through mouth (aerophagy)

## Flatus

- passage of gas rectally

## Flatulence

- discomfort caused by excessive gaseous distension

## Distension

- abdominal enlargement causing tightness of skirt or trousers (due to distension with flatus, fluid, fat, foetus or faeces (5 F's))
- indigestion
- flatulent, painful, regurgitant

## Reflux

- regurgitation of bitter fluid into mouth which may be stained with bile or certain food

## Water brash

- regurgitation of tasteless or salty fluid to mouth

## Heartburn

- burning sensation behind sternum which may be intermittent; related to posture (reflux); continuous and prolonged (oesophagitis)

## Weight loss

- usual weight; present weight; amount lost
- over what period; rate of loss
- patient may present with 'loose clothing'

## Alteration in bowel habits

- enquire into patient's normal bowel habits, which may vary in normal individuals from three times daily to twice weekly

## Constipation

- reduction in frequency of defaecation as compared with patient's normal state, usually accompanied by hardening of stools
- how infrequent?
- consistency of stool?
- discomfort or straining?
- rectal pain?
- constipating drugs

## Diarrhoea

- increase in frequency of defaecation, as compared with patient's normal frequency - usually accompanied by looseness of stools which may be liquid or semi-formed
- associated abdominal or rectal pain?
- contact or possible source of infection - specific foods, restaurants, foreign travel, friends or family members with similar symptoms, drug ingestion, e.g. antibiotics
- spurious - secondary to severe constipation in elderly ("overflow diarrhoea")

## Stools

- Hard? Small? Pencil shaped? Pellets?
- semi-formed – " porridgy", liquid
- large, bulky (high fibre diet)
- colour - black (melaena, iron, bismuth); clay coloured (obstructive jaundice); yellow (steatorrhoea)
- abnormal constituents – blood (on surface or toilet paper - haemorrhoids); blood, (mixed with stool - colitis, dysentery); mucus; pus; steatorrhoea (stools bulky, yellow, offensive, difficult to flush away, leaving greasy stain on lavatory pan)

## Disturbance of function

- urgency
- sense of incomplete emptying
- incontinence

## Piles/haemorrhoids

- how long present?
- painful?
- bleeding?
- prolapsing?

## **Jaundice**

- urine dark, pale stools, sclera and skin yellow
- constant, fluctuating or progressive?
- itching?

## **Miscellaneous**

- sore tongue? coated tongue?  
swollen tongue?
- bad breath (halitosis)?
- dry mouth?

## **Malabsorption**

- oedema?
- skin lesions? purpura?
- bone pain?
- anaemia? symptoms of anaemia?

# Genitourinary System

## Bladder

- frequency - during day and/ or night (nocturia)
- flow rate, volume
- retention
- dribbling
- urgency/strangury/precipitancy
- pain (dysuria)
- enuresis (bed wetting)

## Urine

- colour – clear, turbid, blood (haematuria)
- smell
- passage of stones, grit
- loin pain
- site, character, radiation (e.g. to groin)

## Oedema

- ankles, dependent oedema
- abdomen, ascites
- facial, peri-orbital swelling

## For Females

### Menstruation

- age at onset (menarche)
- age at cessation (menopause)
- menses – regularity, duration, volume, pain (dysmenorrhoea)

### Intermenstrual discharge

- character e.g. purulent, blood stained
- intermenstrual pain (site, character etc.)
- date of last menstrual period
- prolapse

## Dyspareunia (pain during intercourse)

## Incontinence

- stress (e.g. on coughing)?
- continuous?

## Contraceptives (in drug history)

## History of pregnancies

- Outcome, including abortion (spontaneous or therapeutic), with dates. Usually written as Para x+y (Parity - where x is the number of completed and y the number of failed / incomplete pregnancies).
- miscarriages – gestational age, associations (e.g. fetal malformation, pre-eclampsia)

## For Males

### Specific questions

- impotence
- urethral discharge – purulent, mucoid, blood-stained
- prostatism – poor urine stream retention of urine, nocturia
- prostatitis – pain at end of micturition
- injuries

# Central Nervous System (CNS)

## Handedness

### Loss of consciousness

- sudden – warning; tongue biting; injuries sustained; passage of urine/ incontinence; duration after effects; precipitating cause; relief with food (sugar)

### Mental state

- memory – short and long term
- independent opinion of relative or friend should be sought
- hallucinations
- agitation
- delusions
- intellectual changes

### Headache

- character
- site
- duration
- associated symptoms – vomiting
- aggravating or relieving symptoms - time of day, change in posture, straining (e.g. defaecation, micturition)

### Weakness or paralysis of limbs or any muscles

- sudden
- gradual
- progressive
- distribution

### Abnormalities of gait

- dragging leg, dragging or drop foot, wearing out toes of shoes? pattern of shoe wear
- rolling or staggering; on side? dominant side?

### Numbness or “pins and needles” in limbs or elsewhere (paraesthesiae)

- loss of sensation?
- smoking, or cooking, burns of fingers?

### Dizziness / giddiness

- rotational vertigo?
- clumsiness?
- dropping things?
- difficulties in movement?

### Visual disturbance

- seeing double (diplopia)?
- dimness of vision?
- ‘Zig-zag’ figures (fortification spectra)?
- visual field defect?

### Tremors

#### Deafness

- lateralised?
- high or low pitched sounds?
- history of noise exposure?
- tinnitus (ringing in ears)

#### Sphincters

- incontinence, faecal, urinary
- retention of urine?

#### Speech disturbance

- duration
- onset – sudden, gradual
- nature – dysphasia, dysarthria

# Endocrine System

## Hair

alterations in hair growth – baldness; hirsutism – distribution of hair (male pattern etc.)

## Weight

- weight gain/time
- weight lost /time
- weight at key ages
- appetite

## Specific questions

- thirst and polyuria (diabetes insipidus)
- changes in skin, voice and bowel habit (e.g. hypothyroidism – coarse skin, dry skin and hair, weight gain and hoarseness)
- temperature preference
- neck swelling
- pigmentation
- sweating
- visual disturbance (fields)
- flushes
- growth abnormality
- tremor
- libido

# Haemopoetic System

## Sore tongue

- pernicious anaemia

## Blood loss

- menorrhagia
- haemorrhoids; obvious upper or lower GI bleeding; haematuria

## Pallor

## Bruising

## Symptoms of anaemia

- tiredness
- breathlessness
- palpitations

- ankle swelling
- angina
- intermittent claudication

# Skin

## Occupation

## Exposure to irritants, drugs, sunlight

## Rashes

- type
- situation
- duration
- treatment?
- painful?
- itching (pruritus)?

## Pigmentation

- distribution?

# Musculoskeletal System

## Swelling of joints

- one joint or multiple joints, symmetry, distribution

## Pain

- time of day?
- effect of exercise?
- flitting (from joint to joint) or fixed?

## Stiffness

- effect of exercise?
- morning stiffness?

## Mechanical dysfunction

- in terms of normal activity
- standing, walking, activities of daily living (ADL – e.g. combing hair)

## Previous bone or joint injury

- recent or distant past?

## Past History

- Illnesses (with dates): ask specifically about childhood infections, tropical infections, hypertension, diabetes, TB, jaundice and epilepsy – note, if absent
- operations
- injuries
- vaccination
- insurance examination
- obstetric and menstrual history

## Family History

- number and health of children
- health of partner
- any similar or serious illness in parents, grandparents, siblings
- longevity of family members: cause of death
- in “genetic disease” construct family tree

Very often, valuable information about the patient’s complaints, family history and social background can be obtained by interview with relatives. This is always essential in paediatric practice, and often essential in adult medicine, for example, when the patient is unable to communicate.

## Drug History

- any medications, taken in the past and for current illness
- current medications should be listed accurately, with the dose and timing e.g. Amlodipine 10mg o.d. Also include “over-the-counter” (OTC) Medication, such as ibuprofen
- ask about and record any adverse drug reactions/allergies
- ask about recreational drug use.

## Social and Personal History

- occupation - whether employed or unemployed
- location, type, size of house (where necessary)- the need to climb stairs, for example, may prevent patients returning to their own house
- family circumstances, e.g. housing, living with parents, number of dependents
- hobbies and recreations
- tobacco (cigarettes, cigars, pipe) – present smoker or ex-smoker (record number of years). Calculate “Pack Years” – packets per day x years
- alcohol - weekly amount, type, past history of alcoholic intake (note importance of reliable corroboration). Calculate units per week
- Physical exercise - number of times per week on average
- Duration of exercise on average - intensity: mild/moderate/intense (advice is for minimum of 5 x 30 minutes of moderate exercise per week)

# Systemic Examination

The examination should now proceed to examination of the systems in turn – cardiovascular, respiratory, abdominal (GIS, GUS), neurological and so forth. The following is a summary of what is found in textbooks and includes the more important physical signs. It is not exhaustive but will still be a considerable challenge to students early in their careers. It is important to remember that it will take years to become proficient in examination and to identify clinical signs, many of which are uncommon.

To begin with it is important to go through the examination process carefully and to gain experience of normal signs as, much as abnormal ones.

The systematic examination follows a sequence:

- inspection
- palpation
- percussion
- auscultation

that is helpful in remembering the signs to be elicited. It is, however, not merely a process to be gone through.

It is important to try and piece together the signs that have been identified, and to predict the signs to be found from the history and general examination. For each system the first step is inspection. This takes experience to interpret the significance of what is seen. This is followed by palpation with the warm hand(s), followed by percussion to determine the position, size and state of the underlying organs. Finally, auscultation (with a stethoscope) is carried out.

For students this is the most difficult part, as it requires training to interpret new auditory associations.

This auditory experience may be acquired most rapidly by listening day after day to the same abnormality, in the same or different patients.

For most purposes the bell-shaped chest piece is preferable and should be used particularly to identify low pitched sounds and murmurs, chiefly at the apex. The diaphragm type of chest piece is better for picking up high-pitched murmurs and in amplifying low intensity (“distant”) breath sounds. In general, cheaper quality stethoscopes (of the type provided for blood pressure measurement) are inadequate for detecting murmurs. A basic diagnostic stethoscope (e.g. Littman Classic) is essential.

# Physical Examination

## Initial general examination

In many patients more can be learned from the initial general examination than from separate examination of the various systems, which will follow.

1. note the temperature, pulse rate and respiratory rate, especially any change in these since the day of admission.
2. assess severity of illness, nutritional state, dehydration
3. presence or absence of distress (including type of distress, e.g. pain, cough, dyspnoea etc.)
4. mental state (orientated, lethargic, drowsy, comatose etc.)
5. constitution  
physique – obese/thin, muscular, fit/unfit looking, evidence of weight loss, cachexia?  
skeletal – height, weight, proportions, any obvious deformities.
6. psychological state – anxious, irritable, depressed
7. facies – flushed, pallor, puffiness, hirsute
8. general colouration of skin and mucosae - pallor, pigmentation, jaundice
9. cyanosis - lips, nails, mucosae
10. oedema – dependent (legs, lumbosacral, periorbital, abdominal, ascites), generalised (anasarca)
11. skin - sweating, rash, loss of elasticity or of subcutaneous fat, nodules, spider naevi, purpura

Many of these features may have been noticed during the history taking. With experience, this may help direct and focus history taking and examination.

A complete physical examination should now be conducted, system by system, beginning with the one which, as judged by the history, is most likely to be involved. Before carrying this out, it is wise to focus on certain special areas of the body which are apt to be overlooked during a systematic examination. These are now described.

## Specific Components of the General Examination

### Eyes

- exophthalmos (sclera seen below iris); widening or narrowing of palpebral fissure, retraction of upper lid, lid lag, ptosis (unilateral, bilateral) constant or worse as day goes on (e.g. myasthenia gravis)
- sclera – colour
- conjunctive – pallor, congestion. presence or absence of squint (strabismus)

### Nose

- movements of alae nasi
- discharge
- tenderness over the paranasal sinuses
- breathing through nose or mouth

## Mouth

- angles of mouth – fissuring, cheilitis
- tongue – moistness, furring, presence, absence or flattening of papillae, fissuring, colour, wasting, fasciculation.
- teeth – shape; loss of teeth, caries and cavities. If no teeth are dentures worn and do they fit well?
- gums – hypertrophy, retraction, pus
- fauces – reddening of pillars, tonsils – size and exudates?
- pharyngeal wall – condition; post-nasal discharge?
- mucosa – ulceration, pigmentation.

## Neck

- increased folds of skin from loss of weight
- examine for large lymph glands – palpate successively submandibular, occipital, cervical and supraclavicular groups.  
The size, tenderness, mobility and consistency of palpable glands should be noted.
- neck veins (see later)

## Thyroid

- normal size or enlarged?
- If enlarged – does it move on swallowing, uniform or asymmetrical, smooth or nodular, bruit present?
- After initial inspection, palpation of thyroid is often best carried out while standing behind patient and allowing them to drink from a glass of water to assess the effect of swallowing.

## Axillae, groins and epitrochlear regions

- examine for enlarged lymph nodes and note type of enlargement as outlined above.

## Breasts

- examine for evidence of tumours, cysts or inflammation.

## Hands

- Clubbing of fingers – excessive curvature of nails in longitudinal axis with obliteration of angle between finger and base of nail and sometimes a “drumstick” appearance of finger tip; fluctuation of the nail bed.
- nails – “spoon-shaped” (koilonychia); brittleness; ridging; pitting; white opaque nails with loss of lunules (leuconychia).
- Heberden’s nodes – osteoarthritic nodules at the distal interphalangeal joints.
- swelling of joints
- wasting of muscles
- colour of the hands
- anaemia; cyanosis (only indicative of anoxia if warm); “liver palms” or palmar erythema (bright red colour of thenar and hypothenar eminences and pulp of fingers).
- temperature of hands – e.g. warm moist hands of thyrotoxicosis; cold cyanotic hands of peripheral circulatory failure; dry puffy hands in myxoedema
- tremor – fine or coarse
- Swellings – if any swelling (tumour) is found it should be examined and the following noted:
  - Site, shape, size, consistency, surface, texture, tenderness, temperature, translucency, mobility, fluctuation, whether attached to skin.

# The Cardiovascular System

## Pulse

This refers to the radial pulse.

The following should be checked:

## Rate

Count over a 15 second period.

An increased rate is called tachycardia (over 100/minute) and a decreased rate, bradycardia (under 60/minute).

There is a wide range of rate in normal individuals. When gross irregularity, due to atrial fibrillation, is present the heart rate at the apex should be counted with a stethoscope for 30 seconds. The difference between this figure and the radial pulse rate is called the "pulse deficit".

## Rhythm

Regular or irregular? An increase in the pulse rate during inspiration and decrease during expiration is physiological and is called "sinus arrhythmia", most marked in childhood.

If irregular, note whether a dominant underlying rhythm is present.

If a regular rhythm is interrupted by beats out of place, or if beats are missed, the irregularity is probably due to extrasystoles.

If the rhythm is completely irregular and the beats are unequal in volume, the irregularity is probably due to the presence of atrial fibrillation – "irregularly irregular" – although it may be due to frequent extrasystoles. Exercise aggravates the irregularity of atrial fibrillation. Electrocardiography (ECG) is often necessary to determine the true nature of an arrhythmia or of persistent tachycardia or bradycardia.

## Volume

This depends on the output of the heart, on the state of the vessel walls and on the amount of peripheral vasoconstriction. It may be described as large, normal or small volume.

## Character

The pulse is "quick rising" when there is increased peripheral vasodilatation, e.g. in hyperthyroidism, fever, anaemia and after exercise. This phenomenon is most marked in severe aortic incompetence where the quick rise and fall give a rough indication of the degree of incompetence. The pulse in this condition is also called "water-hammer", "collapsing" or "Corrigan" (after the physician who first described it). It is of large volume and is best recognized by holding the anterior aspect of the patient's wrist in the palm and elevating the patient's arm.

In aortic stenosis the pulse is of small volume and is slow rising, sustained and slow falling.

## Condition of vessel wall

The vessel should be compressed to empty it of blood and rolled under the fingers. It should be described as palpable or impalpable, hard or soft. This sign is difficult to elicit and interpret.

## Blood Pressure

Blood pressure should always be measured by a sphygmomanometer. Air should be released from the cuff slowly and steadily. The tactile method of estimating systolic BP may be used to determine the level to which the cuff should be inflated, i.e. the level of BP at which the radial pulse disappears. On auscultation over the brachial artery at the antecubital fossa, the first sound to be heard gives the systolic BP. Further lowering elicits sounds becoming increasingly loud and this is followed by a sudden muffling (Phase 4), and disappearance (Phase 5). The latter is taken to represent the diastolic level. Note any variation in Systolic pressure between alternate beats (pulsus alternans).

## Peripheral arteries

Palpate the main vessels - radial, brachial, carotid, femoral, popliteal, dorsalis pedis and posterior tibial - to get some idea of the integrity of the peripheral arterial tree. The pulse should be readily palpable at all these sites in normal individuals. Compare the volume of the radial and femoral pulses, especially in the investigation of hypertension ("radio-femoral delay"). Auscultation over the carotid arteries, to identify a bruit, is indicated when the patient presents with symptoms suggestive of cerebral ischaemia. Examine the state of the retinal vessels (as part of the neurological system).

## Veins

The veins in the legs are examined to detect varicosities or for evidence of thrombosis. By far the most important sign involving the veins is the determination of the venous pressure in the neck.

## Venous pressure

Inspection of neck veins is used to obtain evidence of raised venous pressure. The internal jugular vein is used and preferably the right since this is almost a direct continuation of the superior vena cava, and no valves. This is a difficult sign to detect – essentially one is looking for the effect of changes in the diameter of a large vessel on the overlying tissues.

The patient should be sitting in a semi-reclining position and the vein looked for along a line joining the angle of the jaw and the sternoclavicular joint. The neck must be positioned to relax the appropriate sternomastoid muscle.

The internal jugular venous pressure is seen as a soft undulation and a double peak can often be identified. It is easily obliterated by finger pressure, unlike the carotid artery. The vertical height of the venous column above the sternal angle (junction of the manubrium sterni with the sternal body at the level of the second costal cartilage) is measured and normally this is not greater than 3 cm.

Increased venous pressure is usually evidence of right-sided heart failure. Pressure over the abdomen may increase the degree of venous filling (hepatojugular reflux). Giant systolic ("V") waves may be seen in tricuspid incompetence. Venous overfilling in the neck without pulsation occurs in superior vena cava obstruction.

## Oedema

Cardiac oedema develops first in the dependent parts of the body. The earliest evidence of its presence should be looked for in the lumbosacral area if the patient is in bed and at the ankles if the patient is ambulant. The characteristic sign is 'pitting' (firm pressure with the fingers causes small depressions which remain when the finger pressure is removed).

## Heart Failure

As well as increased venous pressure, other signs of heart failure should be looked for. In right heart failure an enlarged liver and dependent oedema may be found and if tricuspid regurgitation is present the liver may pulsate. Crepitations in the lungs are found in left heart failure and are often accompanied by dyspnoea. A gallop rhythm may be present.

## Examination of the heart

Evidence of function is obtained from symptoms and from signs, such as dyspnoea at rest, increased venous pressure, oedema, liver enlargement and cyanosis. The physical signs derived from an examination of the chest give information concerning the heart's size and the state of the valves.

## Inspection

Note any deformity which might affect the position of the heart or affect its function e.g. pigeon chest, funnel chest, kyphoscoliosis. The normal cardiac impulse is localised to a small area just inside the mid-clavicular line (for definition see under palpation) in the 4th or 5th intercostal spaces, as a definite outward movement of the chest wall. Observe whether the impulse is localised or diffuse and note its situation.

Observe any abnormal movement of the chest wall, or of the sternum, coinciding with the heartbeat. Observe any pulsation at the base of the heart. Note also pulsation in epigastrium due to right ventricle, aorta, or rarely, pulsating liver. The presence and site of any surgical thoracotomy scars should be noted.

## Palpation

Define the apex beat (the point on the chest wall furthest outwards and downwards where the cardiac impulse can be distinctly appreciated). Measure from midline - it lies normally in the 4th or 5th space  $3\frac{1}{2}$ " (7 cm) or less from the mid-line in adults with patient upright. It should lie within a vertical line drawn downwards from the centre of the clavicle (the mid-clavicular line).

The position of the apex moves with change of posture. In disease the apex beat may be displaced by increase in size of the heart or by change in the lungs (collapse, pleural effusion, pneumothorax, fibrosis of lungs). Place the flat of the hand over the apex and then over the base. The character of the impulse may be "localized" or "diffuse", or no impulse may be detected; it may be "heaving", "slapping" or accompanied by a series of vibrations (thrill). Note that assessment of the trachea is essential to determine whether any deviation of the apex beat from its normal position is due to mediastinal shift.

Finally, with the flat of the hand, palpate also the left parasternal area in expiration to detect presence of right ventricular 'heave', which occurs in right ventricular hypertrophy

## Percussion

The position and character of the apex beat is the best way of assessing cardiac size clinically. Cardiac percussion is not performed.

## Auscultation of the heart

It is usual to describe four standard areas for auscultation. Their names do not represent the surface markings of valves but indicate the areas on the chest wall at which sounds arising in the respective valves are best heard. They are the: (1) Mitral area - the apex of the heart; (2) Aortic area - the second right intercostal space; (3) Pulmonary area - the second left intercostal space; (4) Tricuspid area - the left lower sternal border. Auscultation should not be limited to these areas, but should always be performed in these locations (using the bell and the diaphragm) as a bare minimum. Attention should be paid to: (1) the heart sounds; (2) murmurs and (3) friction.

It is very important to learn to recognise the two heart sounds since the position of murmurs in the cardiac cycle is determined largely by reference to them. They are most readily distinguished near the pulmonary area and can then be followed by short steps to other areas such as the apex.

### (1) Heart Sounds

The first and second heart sounds should first be identified. Identification of these sounds may be made by relating them to the carotid pulse or to the cardiac impulse at the apex. Attention should then be directed to their quality and intensity. The first sound, at the apex for instance, may be softened when contractility is impaired; whereas it is loud and sharp in mitral stenosis.

The second sound is accentuated at the aortic area in systemic hypertension and at the pulmonary area in pulmonary hypertension. Both sounds may be muffled in the presence of obesity, emphysema or pericardial effusion. Either sound may be split, for example in the presence of bundle-branch block. Splitting of the second sound at the pulmonary area normally increases during inspiration and is easily heard in children and young adults.

Also in children and young adults, a third heart sound is often present and is physiological. It occurs during the early diastolic filling of the ventricles and is separated from the second sound by a definite gap. In the presence of heart disease a third heart sound may have pathological significance. It is a common finding in heart failure. Here the combination of an increased heart rate and a loud third sound gives rise to one form of "gallop rhythm". A fourth heart sound coinciding with atrial systole is also a common cause of gallop rhythm and is often heard when the left ventricle is under strain as in hypertension or recent myocardial infarction. It occurs shortly before the first sound and is to be distinguished from splitting of the first sound. Third and fourth sounds are readily recognised when both are present, but they may be superimposed on one another. In any event in the short diastolic interval of tachycardia it is often far from easy to define the type of "triple rhythm".

With the presence of metal prosthetic valves, prosthetic heart sounds may be heard. These are, unsurprisingly, metallic in quality but differ according to which valve has been replaced and the type of valve – bi-leaflet valves typically being quieter than tilting disk (Bjork-Shiley) valves and than the rare, older ball and cage (Starr-Edwards) valves. The sounds may be heard from a distance, and suspected in the presence of thoracotomy scars.

## (2) Murmurs

Murmurs are additional to the heart sounds and result from turbulent blood flow. They may arise where blood is forced through a narrowed valve orifice or regurgitates through a valve which is incompetent.

Abnormal communications between the chambers of the heart or great arteries may also give rise to murmurs. Sometimes murmurs, always systolic in time, may occur in the absence of any demonstrable structural lesion of the heart and are termed “functional”, “innocent” or “benign”.

In listening to and describing a murmur the following points must be noted:

### (a) Timing

Systolic or diastolic. It is this which gives most trouble to students. Murmurs are best timed by placing their position with respect to the heart sounds, systole being the period between the first and second sound, diastole between second and first sound. The first and second sounds must, of course, have been correctly identified. It may be necessary to use the apex beat or the carotid pulse to time a murmur where cardiac sounds are difficult to distinguish.

The radial pulse should not be used for this purpose.

(b) Position of maximum intensity – e.g. mitral or aortic area.

(c) Conduction or radiation: the direction in which the murmur is heard clearly – for example, to the carotids in aortic stenosis, to the axilla for mitral regurgitation.

### (d) Intensity

This is described as faint, moderate, loud or very loud and may be graded in intensity.

### (e) Quality or character.

Various terms are used, among which the most useful are high-pitched or low-pitched, “rumbling”, “harsh” or “rough”, “blowing”, or “musical”.

### (f) Change of murmur with posture and during the phases of respiration.

The more inconstant a murmur, the less likely is it to be significant of structural damage. Sometimes murmurs of pathological importance may only be heard after exercise. Murmurs must be studied at the bed-side and the following incomplete account deals in summary form only with those which the student should aim to recognise early in his career

## Diastolic Murmurs

Diastolic heart murmurs are always pathological.

- **At the apex**

The diastolic murmur of mitral stenosis is maximum near the apex of the left ventricle and is poorly conducted.

Low-pitched and rumbling in character, it is best heard with the bell of the stethoscope. Characteristically its onset is “mid-diastolic”, that is, after a short interval from the second sound. Sometimes it is mainly pre-systolic (very late diastolic) and leads up to an accentuated first sound. The pre-systolic accentuation is due to atrial contraction and is absent in atria fibrillation.

These two components of the murmur may be continuous, so that it occupies most of diastole. Sometimes a mitral diastolic murmur may be recognised only if the patient is exercised and turned on to the left side. This manoeuvre should be performed in all patients.

The “opening snap” of mitral stenosis best heard just internal to the apex beat. It is due to sudden tension in the damaged valve as its opening is arrested.

- **At the aortic area and left border of sternum**

The diastolic murmur of aortic incompetence (aortic regurgitation) is often maximum in the 3rd and 4th intercostal spaces at the left sternal edge. It is an “early” diastolic murmur, that is, it follows the second sound immediately.

It is usually of faint or moderate intensity, of blowing quality and diminuendo. It is relatively high-pitched and therefore best heard with the diaphragm of the stethoscope.

The patient should be leaning forward and holding the breath in full expiration, a manoeuvre that should be performed in all patients.

## Systolic Murmurs

Systolic murmurs may occupy the entire systolic interval (pansystolic) as in mitral incompetence or VSD, or may be mid-systolic (ejection systolic) as in aortic or pulmonary valve stenosis.

- **At the apex (mitral area)**

The systolic murmur of mitral incompetence (mitral regurgitation) is conducted to the left axilla and sometimes to the back; is often loud, medium or high-pitched (“blowing”). The first sound is not accentuated and may be soft or absent. It has to be distinguished from benign murmurs which are less loud, less well conducted, blowing or musical in character and often vary with posture. It is often “pansystolic”, being continuous from first sound into the second sound.

- **At the pulmonary area**

A loud rough mid-systolic murmur accompanied by a thrill may indicate congenital pulmonary stenosis (rare). Most systolic murmurs here and down the left side of the sternum are benign.

- **At the aortic area**

A loud, low-pitched, rough systolic murmur conducted into the neck (and sometimes accompanied by a thrill) suggests aortic stenosis. It is characteristically mid-systolic (ejection systolic). The second sound is often faint or absent.

The pulse is of poor volume and slow rising character to an extent determined by the degree of stenosis.

The same murmur is commonly heard in elderly patients who have aortic valve sclerosis without narrowing.

This is not accompanied by narrow pulse pressure, low volume pulse or radiation of the murmur.

- **Friction**

Pericardial friction is distinguished by its superficial quality i.e. it sounds as if it were nearer to the ear than the heart sounds. It is to and fro and has a coarse “shuffling” quality. The patient should be asked to hold his breath – pericardial friction will not disappear but pleura-pericardial friction may disappear.

# The Respiratory System

The respiratory system is examined in a conventional order. General examination will involve inspection of the fingers for clubbing, cigarette tar staining, cyanosis, CO<sub>2</sub> retention (warm hands bounding pulse), T<sub>1</sub> root wasting, tremour - fine, tremour - asteritis; also skin, nailbeds, lips and tongue for cyanosis. The character of any sputum should be noted, especially the presence of blood (haemoptysis) or pus.

## Inspection

Respiratory movement should be first observed, and the following points noted:

Rate: Normally about 12-18 cycles a minute at rest.

The rate is increased in a number of conditions, e.g. acute pulmonary infections, pulmonary thrombo-embolism, heart failure and any condition increasing the work of breathing.

(2) Rhythm: usually regular; alternating periods of apnoea and hyperpnoea ("Cheyne-Stokes" respiration) may occur with cerebral disease, e.g. stroke.

(3) Depth: increased in conditions producing metabolic acidosis (air hunger), for example diabetic coma, salicylate poisoning. Decreased (often due to pain) in pleurisy, fractured ribs and "acute abdomen", or from depression of the respiratory centre by drugs, such as morphine, which also slows the respiratory rate.

(4) Sound: normally quiet and barely audible. Stridor indicates obstruction of the upper respiratory tract. Louder sounds may have a "hissing" quality in "air hunger", rattling or bubbling in pulmonary oedema, wheezing in asthma or chronic bronchitis.

(5) Uneven movement: the normal chest expands symmetrically. Uneven movement may result from deformity, increased "stiffness" of one lung, pleural thickening or fluid, or narrowing of a bronchus. The affected side may move less and the other side may move more than normal.

Paradoxical movement of the chest usually follows multiple rib fractures. In this situation the affected flail segment of the chest wall retract, instead of expanding, during inspiration. First, stand directly in front of the patient and look for abnormalities of shape. Repeat from the back and both sides. The normal chest is symmetrical; note the position of nipples and whether spinal curvature is abnormal, i.e. whether kyphosis or scoliosis is present.

## Palpation

(1) Position of the trachea: the patient's chin should be in the midline and the neck slightly extended. Place the index finger in the suprasternal notch and gently feel for the trachea, which should be central. Note, also, how many fingers can be inserted between the sternum and the thyroid cartilage horizontally. This space will normally accommodate two fingers; the space is reduced when the lungs are hyperinflated in emphysema.

(2) Note the spacing of the ribs, local tenderness, swelling or depression and the position of the cardiac apex beat. The neck and axillae should be examined for lymphadenopathy (above).

(3) The respiratory movements are examined from the front or back by laying the hands on each side of the chest symmetrically, stretching the skin with the fingers and with the thumbs extended to touch each other in the midline. The fingers remain fixed on the chest wall and the movement of the thumbs reflects chest wall movement. Maximum chest expansion may also be measured with a measuring tape at the nipple line.

(4) Tactile vocal fremitus. This is a classical sign that is probably of little additional value to the detection of vocal resonance (below).

Place one hand on the chest wall and feel for vibration produced when the patient pronounces a “resonant” word, e.g. “ninety-nine” or “one, one, one”. Fremitus is usually equal on both sides - pleural effusion abolishes it completely.

## Percussion

Gives an indication of the condition of the underlying lung and pleura. Compare the note over corresponding areas on each side, either by moving from one side to the other moving from the apex to the base; or examining each side sequentially.

(1) Hyper-resonance. When the lung contains more air than usual, as in emphysema, or when there is air in the pleural cavity, as in pneumothorax.

(2) Dull or impaired resonance. A relatively solid lung-collapse, consolidation, fibrosis, thickened chest wall or pleura may impair the note. The note is completely dull (“stony dull”) when fluid is present.

(3) “Stony” dullness: usually signifies a large pleural effusion.

(4) Cardiac dullness: is not reliable as a guide to either the size or the position of the heart.

(5) Upper border of liver dullness. This is often lower than normal (5th interspace) when emphysema is present. The lower border of lung resonance is found to lie at the 8th rib in the mid-axillary line and at the 10th rib posteriorly in the scapular line.

## Auscultation

This should be carried out symmetrically over the whole chest while the patient breathes freely through the open mouth. Compare the breath sounds on the two sides; slight differences are usually not significant

(1) Breath sounds

The normal breath sound heard over the lungs is a murmuring or rustling sound, heard mainly during inspiration and at the beginning of expiration - vesicular breathing. This sound is probably caused by the passage of air to and fro in small, or even relatively large, bronchi at a distance from the chest wall, and not by alveolar air movement, which probably takes place solely by diffusion. Over the trachea and main bronchi a harsh sound is heard throughout inspiration and expiration. This sound arises in the major airways and larynx and is called the bronchial element.

Normally the bronchial element is inconspicuous over the lungs but in certain areas where the trachea and main bronchi are near the surface, for example the right apical region and between the scapulae, the bronchial element may be easily detected and the breath sounds are then referred to as bronchovesicular. This is a normal finding.

Abnormalities of breath sounds:

(a) Diminished breath sounds occur if there is: (i) a thick chest wall; (ii) emphysema; (iii) poor chest movement due, for example, to pain on respiration; (iv) fluid or air in the pleural cavity, also pleural thickening; (v) collapse of lung tissue

(b) Increased breath sounds may be heard through a thin chest wall, or if the patient is over-breathing. Increase in the intensity of the breath sounds is unimportant unless there is also an alteration in the quality of the sounds.

(c) Alterations in the quality of the breath sounds: where there is airway narrowing, such as in bronchitis and asthma, the expiratory phase of vesicular breathing is prolonged. An important qualitative alteration in the breath sounds is bronchial breathing.

In this, the bronchial element of the breath sounds is conducted to the periphery of the lung with abolition of the normal vesicular element. The sound is quite distinctive and must be learned by practice.

Its characteristics are a harsh resonant quality; equality in length of the sounds heard during inspiration and expiration; the expiratory sound has the same or higher pitch than the inspiratory sound; a distinct pause between the sounds heard during inspiration and expiration.

The presence of bronchial breathing is diagnostic of consolidation, complete deflation of lung in pneumothorax or cavity formation in the lung. It is usually accompanied by increased vocal resonance and fremitus.

## (2) Voice sounds

The voice normally resonates through the lungs and can be easily heard through the stethoscope - vocal resonance. This is examined by asking the patient to repeat "ninety-nine", "one-one-one", or "one-two-three", while the physician listens over comparable areas on the two sides of the chest. Increased vocal resonance indicates consolidation or cavity formation - when even the whispered voice is transmitted, it is referred to as "whispering pectoriloquy".

(Note again the association between bronchial breathing, whispering pectoriloquy and increased tactile vocal fremitus). Decreased vocal resonance is most often due to fluid in the pleural cavity, to reduced ventilation of a part of the lung (for example, bronchial narrowing from a tumour) or to pleural thickening. Sometimes at the upper limit of a pleural effusion the voice sounds have a bleating quality — aegophony.

(3) Adventitious sounds Adventitious sounds may be heard, in addition to normal breath sounds.

These are:

(a) Wheeze (rhonchi)

These are due to narrowing of the bronchi from obstruction by secretion of mucus or by congestion. They are predominantly wheezing expiratory sounds and may be subdivided into low-pitched rhonchi and high-pitched (sibilant) rhonchi, the differences in tone reflecting the size of the affected airways.

(b) Crepitations

Interrupted high-pitched crackling sounds, which may be due to opening of alveoli and small airways. They are heard predominantly at the end of inspiration and may be altered by coughing. When they arise in the bronchi, they are coarse and bubbling in character and are heard in both inspiration and expiration. Fine crepitations arise in the periphery of the lung and are heard most often at the lung bases. They are heard mainly at the end of inspiration and may be caused by fluid or fibrosis.

(c) Pleural friction rub

A constant to and fro noise, i.e. heard in both inspiration and expiration, due to the rubbing together of the inflamed parietal and visceral pleura. It is distinguished by its "to and fro" character and by the fact that it is heard superficially (i.e. close to the end of the stethoscope). In quality it may be loud and creaking and then it may be palpable as a friction fremitus, or fine and crackling, when it may be difficult to distinguish from coarse crepitations. Friction is always best heard where movement of the lungs is greatest and is most often detected at the bases laterally or posteriorly. It is usually, but not always, associated with characteristic pleuritic pain and is usually loudest over the site of the pain.

# The Abdominal Systems (GIS, GUS and Haematological)

## Examination of the Abdomen

Follows the conventional order – inspection, palpation, percussion and auscultation:

### Inspection

(1) The general contour of the abdomen. Generalised enlargement may be due to obesity, to distension of the intestines with either gas or faeces, to the presence of fluid in the peritoneal cavity (ascites) or to pregnancy (the 5Fs). New eversion of the umbilicus may indicate that the distension is due to some pathological cause. Asymmetrical or localized enlargement of the abdomen is caused by enlargement of a viscus, e.g. liver, spleen, stomach, pregnant uterus.

Retraction of the abdomen (the opposite of enlargement) is seen in emaciated patients and due to severe dehydration.

(2) The appearance of the skin.

The skin may be wrinkled, shiny, tense or oedematous. Scars of previous abdominal operations and striae indicative of abdominal distension in the past should be noted. Pigmentation either localised or generalised may be present. The presence and distribution of hair is important in endocrine disorders. Sparseness or absence of axillary and pubic hair occurs in pituitary deficiency, and in the elderly. When there is obstruction to the portal vein or inferior vena cava, dilated tortuous veins may be present over the abdominal wall and the direction of flow in these should be determined. Spider naevi occur in the skin area above the nipple line in chronic liver diseases.

(3) Movement of the abdomen.

Normally the abdomen moves freely with respiration. The extent of this movement depends upon the type of respiration and is greatest in patients whose respiration is predominantly diaphragmatic rather than intercostal.

Excessive abdominal movement is seen when the abdominal muscles are used as accessory muscles of respiration.

Diminished or absent respiratory movement is associated with an inflammatory lesion in the peritoneal cavity e.g. perforation.

(4) Pulsation. The abdominal aorta may be seen pulsating in the epigastrium especially in thin, normal subjects. Other causes of epigastric pulsation are transmitted pulsation from the right ventricle, dilated or aneurysmal dilatation of aorta or a pulsating liver in tricuspid incompetence.

(5) Peristalsis. Visible peristaltic movements may be seen in thin, emaciated subjects, but if accompanied by distension and moving predominantly in one direction, suggest obstruction. In pyloric stenosis, the stomach is distended in the left upper abdomen and peristaltic waves are seen passing from left to right. Conversely, in obstruction of the transverse or descending colon, the peristalsis crosses the upper abdomen from right to left. In small bowel obstruction the distended coils of intestine form a "ladder" pattern in the centre of the abdomen.

### Palpation

The technique of abdominal palpation varies, depending on the purpose for which it is employed. If possible, remove all pillows but one, so that the patient is lying flat.

The examiner should, if possible, sit or kneel by the bedside when palpating the abdomen. For most purposes the warm hand is placed flat on the abdomen but sometimes when fluid is present it is necessary to “ballot” for organs using the pulp of the fingers.

(a) General palpation. It is usual to begin by palpating gently each of the four quadrants of the abdomen, any area of suspected tenderness being examined last. This helps to gain the patient’s confidence and will also determine the presence or absence of any marked guarding or rigidity of the abdominal wall and areas of tenderness. It will reveal any gross swellings or enlarged viscera. Deeper palpation can then be used to supplement the information already gained. Try and determine the shape, size, nature, consistency, degree of movement and mobility of any mass which can be felt.

Note whether it is tender or not.

The commonest palpable pathological swellings are the enlarged liver, spleen or kidney, for which special techniques of palpation are used (see below).

Other palpable pathological swellings are enlarged urinary bladder or gall-bladder, and tumours of the stomach or colon. In the left iliac fossa the descending colon is often palpable, either because it is filled with faeces (constipation) or because it is spastic. Learn to recognise the feel of the normal abdomen which varies greatly in different individuals and to distinguish the difference between abdominal muscles especially the rectus muscles and palpable viscera or swellings.

(b) Palpation for enlargement of specific organs. Attempt to feel the liver, spleen and kidneys in turn. The liver is sometimes just palpable in health and may appear enlarged in emphysema as it is pushed downwards by the over-distended lungs.

(1) Liver. It is essential to start in the right iliac fossa, lateral to the lateral border of the rectus muscle (to avoid the tendinous intersections) and to work upwards with the fingers dipping, so as to detect the edge of the liver while the patient takes deep breaths. The liver moves with respiration. If the liver is felt, note: (i) that it moves on respiration; (ii) if it has a sharp edge; (iii) its consistency; (iv) firm or soft; (v) the presence of irregularities on its surface and edge, and if present, whether smooth or irregular; (vi) if it is tender - the liver is tender if inflamed (hepatitis) or if it is congested (as in heart failure); (vi) the degree of enlargement which may be recorded in centimetres or inches from its lowest level to the costal margin in the right mid-clavicular line;

(vii) the presence or absence of pulsation (found in tricuspid incompetence); (viii) confirm findings on percussion.

(2) Spleen. The spleen cannot normally be felt, since it must be 2-3 times enlarged before it is palpable. Begin low down on the right side of the abdomen, moving up towards the left upper quadrant. The spleen is more easily felt if the other hand is placed in the left loin to afford counter pressure. The spleen is relatively superficial. It moves with respiration.

If it is palpable, note: (i) its size recorded in centimetres below left costal margin; (ii) the direction of enlargement; the spleen usually enlarges downwards, medially and anteriorly, towards the umbilicus; (iii) its consistency – hard, firm, soft; (iv) the presence of the splenic notch- which is sometimes felt in large spleens and which is diagnostic of splenomegaly; (v) if it is tender; (vi) if the fingers can be inserted between its upper margin and the left costal margin (“One cannot get above the spleen” and this helps to differentiate the spleen from an enlarged left kidney); (vii) if the fingers can be inserted between the posterior margin and the paraspinal muscles, with the patient lying on his right side (“One can get behind the spleen” , again differentiating spleen from kidney); and (viii) on percussion of enlarged spleen there is no overlying band of resonance (unlike the kidney). If there is doubt about splenic enlargement, palpate the spleen with the patient on their right side. This manoeuvre often allows a questionably enlarged spleen to present its edge more easily.

(3) Kidneys. Use bimanual palpation. As with spleen, insert left hand into renal angle posteriorly applying pressure upwards. With right hand, start to palpate low in iliac fossa, applying pressure upwards and downwards, asking the patient to breathe deeply. Alternatively, apply constant pressure from the top hand and intermittent pressure from the underlying hand – “pushing” the kidney towards the top hand. A palpable or enlarged kidney will be felt between the tips of the fingers of the opposed hands. If the kidney is palpable, note:

(i) that it moves with respiration; (ii) if it has a rounded lower margin; (iii) that the right (lower) kidney can be palpated in many normal thin individuals, but that a palpable left kidney always means pathological enlargement; (iv) that, if considerably enlarged, may be dull to percussion, but that the left kidney is crossed by a band of resonance due to adherent overlying colon (in contrast to the spleen).

(4) Uterus and Bladder. These may be felt centrally, usually in the lower abdomen, the uterus when gravid or diseased and the bladder when abnormally distended. Percussion from the umbilicus to the pelvic brim will help confirm.

(5) Palpation for fluid thrill. This is confirmatory of ascites but when it is elicited the presence of free fluid is rarely in doubt. The thrill is generated by tapping one flank and feeling the thrill with the flat of the hand in the opposing flank. To restrict cutaneous transmission, it is necessary to place a hand vertically, in the midline – this is usually provided by an assistant, or the patient.

## Percussion

Percussion may be used to confirm the enlargement of the liver and spleen. Light percussion is used. A band of resonance crosses the enlarged kidney but not the enlarged spleen. The distended bladder is dull to percussion. Percussion is also used to elicit shifting dullness, which is the most valuable evidence of ascites. The abdomen is percussed outwards from the umbilicus and if fluid is present, the flanks will be found to be dull to percussion.

The extent of the dullness can be marked and shown to recede daily, if the amount of fluid is diminishing.

To confirm the presence of fluid, the patient should be laid on one side so that one flank is uppermost, when it will be found that the dullness has shifted and the flank is resonant to percussion. Note that, in gross hepatic or splenic enlargement, the flank may remain dull to percussion, as it is still filled by the enlarged viscus. Accompanying physical signs of ascites are eversion and a crescentic shape of the umbilicus and the presence of a fluid thrill.

## Auscultation

Normally, intestinal movements give rise to sounds known as borborygmi. When peritonitis is present, sounds are often absent; when there is intestinal obstruction, they may be exaggerated, explosive and at a higher pitch than normal. In pyloric obstruction splashing sounds may sometimes be elicited over the stomach if the patient is gently moved from side to side (heard without using the stethoscope).

Examination of the groin and genitalia. Routine inspection and palpation of the groin for swellings due to herniae, lymph nodes, and abnormal vessels should be carried out. When a hernia is suspected, the patient should be examined in a standing position. Examination of the female genitalia is not routinely carried out unless there is a specific indication. In these circumstances a chaperone should be present.

## Rectal examination

Rectal examination should not be omitted in a patient complaining of symptoms referable to the alimentary system, or in those who have passed blood per rectum. The procedure should be explained carefully to the patient and undertaken with great care in patients with anal pain. The patient is laid on the left side with the knees flexed and asked to breathe quietly and relax. The examining finger should be protected by a well lubricated finger stall or glove. Initially, gently separate the buttocks and examine the external anal appearances for external haemorrhoids, fissures, openings of fistulous tracts, perianal abscesses and the purplish indolent undermined ulcers that are seen in some patients with Crohn's disease. The index finger is then gently inserted and palpation performed all round the rectum.

Note: (i) if rectum is full or empty with faeces; (ii) whether it is contracted or dilated; (iii) recognise the normal feel of the prostate in males and the cervix in females; (iv) record any other abnormality such as the presence of an anal ulcer or carcinoma; (v) when the examining finger is withdrawn, examine its surface for blood, mucus, the colour of the stools.

Where appropriate, test a smear of faeces for occult blood. Note that a complete examination of the alimentary system involves inspection of the tongue, teeth, mouth and throat, and examination for jaundice, anaemia and other signs which are dealt with under the general examination section.

# The Nervous System

To examine the nervous system properly, a working knowledge of the anatomy and physiology of the central nervous system is essential. The history and signs assist in localising the site (or sites) of the lesion (or lesions).

A diagnosis is arrived at, primarily by considering the temporal course of the illness but the localisation may suggest the nature of the disorder in some instances. A detailed examination should direct appropriate investigations. There are five main components of the nervous system: (1) the higher cerebral functions; (2) the cranial nerves; (3) the motor system; (4) the sensory system; (5) the autonomic system.

## Higher cerebral function

- (1) Estimate the level of consciousness:
- (a) fully conscious;
  - (b) properly orientated in time and space;
  - (c) able to answer simple questions;
  - (d) responds to commands;
  - (e) responds to painful stimuli;
  - (f) coma;
  - (g) pupillary response to light, absent;
  - (h) control of respiration and vasomotor reflexes impaired.

Note: there are formal assessments that may be appropriate to specific situations – for example, in the critically ill patient or in the confused patient, it is appropriate to make an assessment of conscious level or memory using a standard instrument, such as the Glasgow Coma Scale, or a Mini Mental State examination. These are not covered here.

(2) Note patient's appearance and behaviour. Is he apathetic, agitated or depressed? Does their attention wander? Are they unkempt? Are their replies to questions sensible, reasoned?

(3) Do they have any delusions or hallucinations?

(4) Are there signs of memory loss – simple assessments including name, address, age, DOB, current events, recent events.

(5) Speech: distinguish between:

- (a) Dysphasia - inability to find words for speech or writing (motor) or to understand them (sensory). Sometimes both types are present. Results from damage to the speech areas of cortex.
- (b) dysarthria - interference with motor act of speaking (lower cerebral, cerebellar or peripheral).

It may be convenient at this point to test for signs of meningeal irritation, which does not fit neatly into any other section of neurological assessment:

- (i) neck stiffness; (ii) Kernig's sign;
- (iii) Brudzinski's sign.

## Cranial Nerves

It is convenient to go through these in numerical order.

### I. Olfactory Nerve

This is rarely tested in clinical practice. Test each nostril separately - use oranges, coffee, or other well recognised odours individually. Note any anosmia (loss of sense of smell). Ask the patient about alterations in sense of smell and taste.

### II. Optic Nerve

(a) Test acuity of vision in each eye separately (cover with hand) using a Snellen Chart or available written material. Can patient see? How much can they see?

Perception of light; recognition of moving objects; ability to count fingers; ability to read large type (newspaper headlines); ability to read small type (ordinary newsprint). If there is a defect, can it be corrected by spectacles?

(b) Fields of vision - confrontation method. Check each eye independently.

(c) Fundi

(i) Examine the optic discs, learn to recognise the appearance of the normal optic disc and be able to appreciate gross changes, such as the pallor of primary optic atrophy and marked swelling of the disc (papilloedema) as seen in increased intracranial pressure and accelerated hypertension.

(ii) Note the appearance of the retinal arteries and veins. In healthy young adults, the arterial wall is not normally visible; what is seen is the column of blood. In older patients, a certain degree of fibrosis, which gives a "silver wire" appearance to the arteries, is normal. Veins are normally darker in appearance than the arteries and the normal ratio of width of vein to width of artery is 2:1 or 3:1. An estimation of the arterial wall may be made at arterio-venous crossings. This is accentuated in hypertension giving the appearance of "nipping".

(iii) The general state of the eyegrounds should be observed and the presence of any haemorrhages or exudates, described as 'hard, white or cotton wool', noted.

(d) Pupils

Note: (i) Position, size and shape; (ii) equal or unequal; (iii) regular or irregular; (iv) reaction, directly and consensually, to light and on convergence.

### III, IV, VI. Oculomotor, Trochlear, and Abducens Nerves

Test full range of movements, for gaze fixed on distant objects as well as on a near object. Test the eye movements by asking the patient to follow your finger in a fixed pattern, that tests up and down, with the eyes abducted and adducted, as well as in the midline.

It is very important to keep a reasonable distance (around 1 metre) from the patient and to test the eye movements slowly and deliberately.

Do the ocular axes remain parallel or do squint and double vision (diplopia) develop? Look for nystagmus. Keep test object at a comfortable distance and within the field for binocular vision. Do not expect diplopia at the extreme periphery of the visual fields, which is normally monocular; indeed nystagmoid jerks may occur in normal subjects on extreme deviation of gaze. Note any drooping of upper eyelids (ptosis).

## V. Trigeminal Nerve

**Sensory Division:** Test using cotton wool and blunted sterile pin over the three areas supplied. The testing of the corneal reflex is potentially dangerous and is not routinely done, but only when the history suggests a possible involvement of V or when the other cranial nerves VI and VIII are involved, but V is apparently spared. **Motor Division:** Ask patient to open mouth (note any deviation of mandible). Test strength of opening and closing mouth by counter pressure on the lower jaw.

## VII. Facial Nerve

Is the face symmetrical at rest? Test movements of upper face: (i) wrinkle brow; (ii) close eyelids tightly; (iii) test movements of lower face; (iv) show teeth; (v) whistle.

If there is a difference between the two sides? Is this more obvious in the lower face? Note any difference between expressive movements and volitional movements.

In an upper motor neurone palsy, the paralysis is more obvious in the lower half of the face and volitional movement is more affected than expressive movement. In a lower motor neurone palsy, the whole of the affected side of the face is paralysed for both types of movement.

## VIII. Auditory

### (1) Cochlear

If the patient wears a hearing-aid, remove it first. Test hearing in each ear separately by whispering numbers, with the other ear closed. Distinguish nerve (perception) deafness from middle-ear (conduction) deafness by the following two tests: (i) Rinne's test - a vibrating tuning-fork is held on the mastoid process until the sound disappears, and is then removed to in front of the ear. If the sound is heard again (as it is normally), it indicates nerve deafness. If sound not heard again, middle-ear deafness. (ii) Weber's test - the tuning-fork is held on the middle of the patient's forehead. If the sound is referred to the good ear it indicates nerve deafness on the other side. If referred to the deaf ear it indicates middle-ear deafness (because there is less masking by other sounds).

(2) Vestibular portion concerned with balance: lesions may produce vertigo and nystagmus. Usually tested by caloric tests - not done at bedside.

## IX, X. Glossopharyngeal and Vagus Nerves

Ask patient to say "Ah" and watch palatal movement. The palate should rise well and in the midline.

Note: hoarseness may result from a vagal lesion but examination requires laryngoscopy.

## XI. Accessory Nerve

Test trapezius - shrug shoulders against resistance. Test Sternomastoid - turn chin against resistance.

## XII. Hypoglossal Nerve

Ask patient to stick tongue out and move from side to side. Check for wasting and any fasciculations.

Examination of the limbs and trunk.

This should be done systematically.

Compare arm with arm, leg with leg, making allowances for patient's "handedness". It is usually preferable to finish the examination of the arms before proceeding to the legs.

The examination follows the order:

(i) inspection; (ii) movements – power; (iii) tone; (iv) co-ordination; (v) reflexes and (vi) sensation. The precise sequence is less important than remembering to cover all the sections – tone can come before movements, if it suits better.

(1) Inspection - rhythmical tremor; fast or slow; athetosis; chorea; myoclonic jerks, wasting; fasciculation (muscle twitching). Deformities - wrist drop; foot drop, contractures. These indicate imbalance of antagonistic muscles. Note any asymmetry or atrophy.

(2) Tone (passive movements) - put each joint through a full range of passive movements. Learn to recognise the normal degree of resistance to passive movement and to appreciate increased resistance, due to increased muscle tone. Is increased resistance to passive movement present throughout the whole range of movement ("cogwheel rigidity") as in extrapyramidal lesions, or only initially ("claspknife spasticity") as in pyramidal lesions?

Decreased resistance due to loss of muscle tone is flaccidity. Remember that limitation of movement may also be due to a primary lesion in the joint or to organic shortening (contracture) of muscles.

(3) Power- first make sure that the patient has no gross paralysis, (e.g. hemiplegia which prevents complete movement of a limb). Then test ability to make active movements at each joint by getting the patient to carry out movements against resistance and compare with the opposite side.

As you test each movement think of:

(a) which muscle you are testing

(b) which nerve you are testing

(c) which spinal segments you are testing (e.g. Flexion of elbow

– (a) biceps and brachialis; (b) musculocutaneous nerve; (c) C6.

(4) Co-ordination. Perfect co-ordination, ability to maintain posture and precision of voluntary movement requires not only an intact motor system but also an intact afferent supply from the muscles and joints. When testing co-ordination, therefore, it is important to ask the patient to carry out the tests, first with their eyes open and then closed, and to note any difference. If co-ordination is due to a motor disturbance then closing the eyes makes no difference (motor or cerebellar ataxia); if it is due to interference with the afferent pathway the incoordination is worse when the eyes are closed (sensory ataxia). Can they perform the following tests accurately? (i) Finger to nose; (ii) finger to finger; (iii) heel to knee and then along the anterior border of tibia to great toe; (iv) can they walk heel to toe (tandem gait)?; (v) is there any loss of rapid alternation of movement (dysidiadokokinesia)?; (vi) can they stand steady at attention with eyes closed or do they tend to sway (Romberg's sign)?; (vii) tap the patient's outstretched arms. Do they return promptly to the same position without excessive oscillation?

## (5) Reflexes

### Tendon Reflexes

Upper limb: (i) biceps (C6);  
(ii) triceps (C7); (iii) brachioradialis  
("supinator" C6). Lower limb: (i) knee  
(L3,4); (ii) ankle (S1).

If the reflexes are brisk, tap more gently to get some indication of the reflex "threshold" with respect to normal and test for clonus. This must be sustained for several beats before it is significant.

Superficial Reflexes: (i) abdominals;  
(ii) cremasteric; (iii) plantar – response – flexor or extensor (Babinski's sign).

In recording the results, the following symbols may be used: 0 - absent;  
1 - present, diminished; 2 - normal;  
3 - exaggerated; 4 - clonic.

## (6) Sensation

The testing of sensation is the least objective part of the examination of the nervous system. It requires time and patience on the part of both the examiner and the patient, but slow meticulous testing of all surface areas is tiring and confusing to the patient. The results are sometimes difficult to interpret. For ordinary purposes the following should be tested rapidly in representative areas, comparing one side with the other. It is useful to consider the distribution of spinal roots and peripheral nerves when performing these tests. Areas of sensory loss revealed in this way may then be mapped more systematically. The most sensitive test for loss of cutaneous sensation is ability to recognise two points of a compass.

- (i) Cutaneous sensation
  - (a) Light touch
  - (b) Pinprick (not pain)
  - (c) Temperature.

If any defect of one of these modalities is found, the boundaries of the affected area should be mapped. Start from within the area found to be insensitive and move stimulus radially to define the borders of the insensitive area.

### (ii) Deep sensation

(a) Vibration sense - ability to appreciate the vibration of a large (128 c/s) tuning fork applied over the bony prominences.

(b) Appreciation of passive movement - ability to recognise which digit is being moved and to appreciate the direction of movement (proprioceptive sensation)

(c) Deep pressure pain - firm pressure on the Achilles tendon is normally painful. This is not assessed routinely.

### (iii) Stereognosis

The ability to recognise objects by touch, appreciation of weight and texture. It is important only in cerebral lesions and only then if peripheral touch, muscle and joint sense are present.

It is tested for by asking the patient to recognise, with the eyes closed, objects placed in his hand or to recognise numbers drawn on his palm.

### Autonomic nervous system

Note any disturbance of vasomotor activity especially in the extremities, e.g. any cyanosis, pallor or difference in temperature and any nutritional changes in the parts. On the whole, such changes are more often due to peripheral vascular disease than to interference with the autonomic nervous system.

Note any increase or decrease in the amount of sweating.

## **Sphincters**

Information about these is obtained mainly from the history e.g incontinence or precipitancy of micturition but the tone of the anal sphincter can be determined by rectal examination (see earlier).

# History & Examination in Joint Disease

An accurate diagnosis is essential in the care of a patient with joint disease. Not only must the joints be examined, but a complete and comprehensive history and clinical examination of the patient is mandatory, since joint disease is frequently a manifestation of an underlying systemic disease. The detailed examination of individual joints is best learned at the bedside. What follows, therefore, are some general guidelines:

## History

The following should be specifically noted:

- preceding illness or possible precipitating factors, including local injury, either recent or in the past
- recent urogenital disease e.g. urethritis and recent eye disorders, e.g. uveitis
- date and mode of onset of joint symptoms
- description of complaint
- pain
- stiffness
- mechanical dysfunction
- nature and pattern of subsequent progression
- noting factors which alleviate or exacerbate symptoms
- presence of constitutional features (weight loss, rashes, etc.)
- duration and severity of morning stiffness
- degree of functional impairment in terms of normal activities
- walking distances
- climbing stairs
- ability to put on shoes

- work capacity
- history of drug therapy – especially side effects and surgeries
- family history e.g. haemophilia, gout
- social history

## Physical Examination

Particular attention should be paid to the following -

- general appearance, including posture and gait
- skin lesions
- psoriasis
- lupus erythematosus (LE)
- erythema nodosum
- scleroderma
- subcutaneous nodules
- tophi
- lymphadenopathy
- ocular lesions (associated with some joint diseases)
- hepatomegaly (e.g. Felty's syndrome)

## Joint Examination

The student should learn to recognise the important physical signs of joint disease, which include:

- skin colour
- temperature
- scars of previous sepsis or surgery
- joint swelling
- periarticular swelling
- synovial hypertrophy
- effusion
- bony enlargements due to osteophytes
- presence of nodules
- gouty tophi
- joint tenderness, localised or diffuse (not excluded unless firm pressure applied to joint); if localized, relate to knowledge of underlying anatomy

- joint crepitation - fine “rubbing” crepitation in rheumatoid joints, coarse “grating” or “grinding” in osteoarthritis
- joint deformities – may be fixed or postural
- result from muscle imbalance, joint contractures, subluxation or dislocation
- joint mobility - limited or excessive
- test and record active and passive range in normal plane then check for abnormal mobility in other planes
- muscle changes
- weakness
- atrophy
- shortening
- tendons
- synovial hypertrophy
- presence of nodules

Note: a joint which has a free range of pain-free movement is unlikely to have much wrong with it.

## Examination of the Urine

Examination of the urine is essential.

This is usually performed using DIPSTIX.

- Glycosuria usually (but not always) indicates diabetes.
- Proteinuria may be due to urinary tract infection (and the urine should be examined microscopically for pus cells) but may indicate other primary renal disease. If present, proteinuria should be quantified by measuring the protein/creatinine ratio.
- Haematuria – may be associated with pathology at any level of the urinary tract. Microscopy for casts is essential if glomerulonephritis is suspected.

# Examination of the Patient with a Skin Complaint

## History

Skin and mucous membranes:

1. Duration of complaint and site first affected. (This is often not the site which is maximally involved when the patient is seen as an inpatient or outpatient.)
2. Course of complaint:
  - steady deterioration or exacerbation and remissions
  - are other family members affected?
3. Relationship of complaint to:
  - occupation
  - leisure activities
  - exposure to sunlight, oil, detergents, epoxy resin adhesive, photographic chemicals
4. Previous treatment for this disorder:
  - topical corticosteroid preparations can grossly change the appearance of many dermatoses
5. Current drug therapy including:
  - laxatives, hypnotics, analgesics
  - contraceptives
6. Past history of cutaneous problems.
7. Family history of cutaneous problems.
8. The patient's own views on the aetiology of his problem.

## Physical Examination

Examination of the skin and mucous membranes. Unless the presenting complaint is clearly localised (e.g. warts), the patient should be examined fully undressed, on an examination couch, in a good light, preferably daylight.

Note:

- (1) The distribution of the eruption.
  - Is it mainly on extensor surfaces of limbs or on the flexures?
  - Are body folds involved?
  - Are there scalp or nail lesions?
  - Does the distribution suggest light sensitivity (face, hands and V of neck)?
  - Never forget to examine the oral mucous membranes.
  - Does the distribution suggest an external irritant (footwear or spectacles)?
- (2) The individual components of the skin eruption.
  - Are they macular, as in measles, papular or pustular, as in acne?
  - Are there raised weals (urticaria) or firm nodules (tumours)?
  - The presence of blisters, vesicles, ulceration or atrophy should always be noted when present.
  - Scars and lichenification (thickened skin with increased markings) suggests a chronic, long-standing problem.
  - Excoriations indicate active Pruritus

# Summary Plan for Taking History and Physical Examination in the Adult

Presenting symptom(s)

- (Patient's own words)
- Duration of symptom(s)
- History of presenting complaint(s)
- Systematic Enquiry

Past Medical History:

- Illness
- Operations
- Injuries
- Allergies

Family History

Drug History

Social and Personal history

(1) CVS

- Breathlessness
- Chest pain
- Ankle swelling
- Palpitations
- Dizziness
- Fainting
- Pain in calves
- Rest pain coldness of feet
- Dead fingers and toes

(2) Respiratory System

- Cough
- Sputum
- Haemoptysis
- Breathlessness
- Hoarseness
- Sore throat
- Nasal discharge
- Epistaxis
- Wheezing
- Smoker

(3) GI System

- Appetite
- Weight loss
- Dysphagia
- Nausea
- Vomiting
- Abdominal Pain
- Nocturnal Pain
- Belching
- Flatulence
- Flatus
- Reflux
- Water brash
- Heartburn
- Constipation
- Diarrhoea
- Jaundice

(4) Haemopoietic System

- Sore tongue
- Blood loss
- Pallor
- Bruising
- Symptoms of anaemia

(5) CNS

- Loss of consciousness
- Mental state - memory etc
- Weakness or paralysis of limbs
- Faintness
- Numbness
- Loss of sensation
- Giddiness
- Visual disturbance
- Tremor
- Tinnitus
- Sphincters
- Speech
- Insomnia
- Depression

(6) GU System

- Frequency
- Retention
- Dribbling
- Dysuria
- Loin Pain
- Swelling of face
- Generalised oedema
- Menstruation
- Prolapse
- Dyspareunia
- Incontinence
- Impotence
- Urethral discharge
- Prostatitis

(7) Endocrine System

- Polyuria
- Thirst
- Temperature preference
- Sweating
- Flushes
- Tremor
- Neck swelling
- Libido
- Hair

(8) Locomotor System and  
Joints

- Joint Swelling
- Pain
- Stiffness
- Previous injury
- Mechanical dysfunction

(9) Skin

- Occupation
- Exposure to irritants, drugs,  
sunlight
- Rashes
- Pigmentation

# Physical Examination

General Examination – anaemia, jaundice, temperature, lymphadenopathy, clubbing etc. Examine also – head, eyes, nose, mouth, neck, breast and hands

## Cardiovascular System

Pulse: rate, rhythm, volume, character, condition of vessel wall, blood pressure, peripheral pulses, JVP, arterial bruits, oedema.

Examination of heart: inspection, palpation - apex beat, thrills, right ventricular heave.

Auscultation: heart sounds, murmurs, pericardial friction

## Respiratory System

Inspection: respiratory movement – rate, rhythm, depth, sound, uneven movement, shape of chest.

Palpation: position of trachea and apex beat, respiratory movements, tactile vocal fremitus, lymphadenopathy.

Percussion: Auscultation: breath sounds, voice sounds, adventitious sounds, wheeze (rhonchi), crepitations, pleural friction rub.

## Alimentary System

Inspection: contour, movement, pulsation, peristalsis.

Palpation: tenderness, rigidity, liver, spleen, kidneys, masses, ascites (fluid thrill).

Percussion: organ size and position.  
Auscultation: bruits and bowel sounds.  
Examination of groin and genitalia:  
Rectal Examination:

## Nervous System

Higher cerebral functions – consciousness, memory etc.

Cranial Nerves: Motor System: – wasting, fasciculation; power, tone; co- ordination; reflexes and sensation.

Cutaneous sensation – touch, pain (temperature).

Deep sensation - proprioception, vibration, (deep pressure).

Stereognosis

## Locomotor system

Examination of joints: inspection, palpation, range of active and passive movements, stability.

## Skin

Inspection, palpation description of distribution of rashes, lesions.

## Urinalysis

Record dipstix urinalysis and microscopy (if performed).

## Summary

The summary should include a short narrative of the key points in the history and examination fields

- Differential Diagnosis
- Plan of Investigation
- Treatment Plan

# Special Systems

## History Taking in Obstetrics and Gynaecology

In addition to the components of a general history and examination, there are specific sections in a gynaecological history and in an obstetric history which should be highlighted:

### Gynaecology

1. Parity (usually recorded in the form para x+y, where x represents the number of completed pregnancies and y the number of incomplete pregnancies (e.g. miscarriage)).
2. The date the last menstrual period (LMP) commenced.
3. The usual menstrual cycle; frequency, and duration of bleeding (e.g. 5/28 days). Documentation of the volume of blood loss and the presence of blood clots, use of sanitary towels/tampons, the number used and changing pattern of use.
4. Intermenstrual bleeding (IMB)
5. Post coital bleeding (PCB)
6. Painful periods - dysmenorrhoea
7. Pain on intercourse – dyspareunia
8. Contraceptive history
9. Cervical smear history and results
10. Previous gynaecological procedures
11. Examination – use of a named chaperone where appropriate
12. Examination – pelvic and vaginal examination

### Obstetrics

1. Date of LMP
2. Date (if known) of positive pregnancy test
3. What (if any) confirmatory tests of gestational age (e.g. ultrasound)
4. Prenatal screening tests (e.g. AFP) When and whether performed/ declined and results
5. Fetal movements
6. History of past pregnancies to include for each:

Date

Outcome

Gestation at end of pregnancy

Mode of delivery – SVD, MCFD, LUSCS etc.

Sex, weight and status of baby

Mode of feeding

Current information on child

Complications of pregnancy e.g. pre-eclampsia

Information on the mode of conception (if assisted conception)

Information on the father of the child (e.g. if pre-eclampsia in previous pregnancies)

# History and Physical Examination of the Infant and Child

Infants and children are not mini-adults and require special knowledge, both in taking a history and in examination.

## History

The basic form of the history is not dissimilar to that of the adult but since inherited, congenital and familial problems play a greater part much more emphasis is placed on recording such things as:

- (a) The family history of the child's siblings, parents, grandparents and other close relatives.
- (b) The social background. Are the parents married, are they living together, are all the siblings born of the same parents? Is the home impoverished, over-crowded or insanitary?
- (c) The obstetric history of the mother, including all previous pregnancies and their outcome; and the ingestion of drugs, infections or other incidents during the first trimester (when the foetus is developing) of the relevant pregnancy. Details of delivery are recorded.
- (d) A detailed feeding history for young children and infants. This includes type and volume of milk daily, amount of vitamin supplementation, introduction of gluten-containing cereals and so on.
- (e) Details of immunising and vaccinating procedures, infections which have occurred and recent contact with infectious disease.
- (f) A record of the child's psychomotor development, which is initially mainly a test of developing motor function.

From the age of three years this may be tested more effectively by formal intelligence tests.

## Examination

Before dealing with details there are some broad principles which differ from examination of adult patients.

Pre-school children may be unco-operative, easily frightened or negative. For many reasons the first examination is very important because this may determine the child's attitude to further examination. Here are some basic precepts.

- (a) Unhurried observation of a mother and child entering the room and the latter undressing may be very helpful.
- (b) Time spent making friends with the mother and child may be amply repaid in co-operation.
- (c) Sit down beside the child in bed and do not tower unnecessarily over her.
- (d) At all possible times chat to the child about her food, her doll or any other suitable toy; silence is frightening.
- (e) Begin your examination slowly and carefully. Carry out the most important, painless tests before proceeding to signs with little relevance or productive of discomfort or pain.
- (f) Cold manners, instruments, hands, rooms and patients are all undesirable.
- (g) Remember the safety of young patients. Do not leave open safety pins within reach, do not leave cot sides down and do not under-estimate the speed and mobility of young children!

## **New-born**

It is important that all new-born infants are examined at least twice within the first week of life.

Apart from a brief inspection immediately following birth, they should be carefully examined within a few hours of birth, and at one week. Since most are now born in hospital, this second examination is generally made on the day prior to discharge. New-born cannot communicate their complaints.

It is essential to become familiar with the normal pattern of behaviour in infants – only then can deviations from normality be detected. The “history” remains vitally important but has to be obtained from the mother herself, from her obstetric notes, or from observations made and recorded by the nursing staff.

The vast majority of new-born do perfectly well, but some suffer from disease which is either congenital or acquired in utero. It is frequently possible to predict before birth an “at-risk infant” who should be admitted to an observation nursery following birth.

Some predictable problems:

- premature labour
- known placental insufficiency
- hydramnios or oligohydramnios
- rhesus iso-immunisation
- multiple births
- maternal diseases such as – diabetes
- mellitus, thyrotoxicosis
- instrumental deliveries
- birth asphyxia

Some problems cannot be foreseen but abnormal behaviour alerts suspicion:

- vomiting
- lethargy
- food refusal
- convulsions
- haemorrhage
- delayed passage of urine or meconium
- pallor, cyanosis or jaundice
- tachypnoea or other disorders of respiration
- excessive weight gain or loss

## **Inspection at Birth**

Note whether the baby is breathing at all and if so the respiratory pattern. Note whether the baby is cyanosed or not. The heart rate is counted and the motor tone and response to stimuli are noted. From these an assessment of the new-born is made (Apgar score). Obvious developmental abnormalities such as meningomyelocele and hydrocephalus and extroversion of bladder are noted. An assessment of the maturity (gestational age) of the new-born is made from size, general appearance and reference to skin, nipple size and character of external genitalia. The number of umbilical arteries is recorded.

### **First Examination (1-4 hours old)**

The weight and head circumference is recorded. The baby is systematically examined for developmental abnormalities such as extra digits, webbing of fingers or neck, Down's syndrome, abnormality of head shape, abnormal facies (as in renal agenesis), haemangioma, pigmented naevus, spina bifida and a host of others.

Conditions acquired in utero such as talipes equinovarus (club foot) are noted and perinatal damage such as cephalhaematoma or brachial plexus injury or rarely fracture of clavicle or of a limb. Evidence of dysmaturity caused by fetal malnutrition due to placental inadequacy may be present. The normal healthy baby who is warm and dry, sleeps most of the time unless hungry, when she cries lustily.

The state of consciousness is assessed, since brain damage around birth (perinatally) may result in obvious twitching (convulsions) or drowsiness. The anterior fontanelle is palpated. The respiratory rate is about 40/minute. Percussion and auscultation require practice but are of limited value as compared to observation. Observation of respiratory difficulty with excessive thoracic movement is a good indicator of respiratory distress. The heart rate is around 140/minute and replaces pulse counts. The presence or absence of cyanosis centrally and peripherally is noted and femoral pulses defined. The number of umbilical arteries present is again noted. Blood pressure is only recorded in specific cases.

The rapid heart rate makes sounds and murmurs difficult to interpret to the untutored ear. The abdomen is inspected, palpated and percussed. The mouth is inspected for cleft palate and the patency of the anus determined. Particular care is taken to exclude jaundice which, in the early hours of life, is usually due to severe haemolysis. The bladder should be palpated and if large, suggests posterior urethral obstruction. Abnormalities of genitalia, such as hypospadias, intersex or undescended testes should be noted.

The hips should be flexed and then abducted. A "clunk" suggests the presence of congenital dislocation (Ortolani's sign).

### **Second Examination (Within 5-7 days of delivery)**

This includes the same aspects as the first examination with additional possibilities, due to the longer period of extra-uterine life which involves potential infection, inadequate takeover of previous placental functions (such as clearing bilirubin) and alterations in circulation such as the normal closure of the ductus arteriosus.

The new-born loses 10-15% of body weight and may take 10-14 days to regain his weight. Examination of the ears is a routine and important part of the examination of older infants and any febrile children, but is difficult and not essential in the healthy neonate.

The examination of preterm babies (prematures) requires special expertise only acquired by experience.

The umbilicus should be examined for possible inflammation (Omphalitis) and the eyes should be inspected for conjunctivitis varying from non-specific “sticky-eye” to fulminating gonococcal ophthalmia. Make a smear as well as a culture of conjunctival discharge. The withdrawal of maternal hormones may result in breast engorgement and lactation (witch’s milk). Do not squeeze the breast or mastitis may occur.

### **Older Babies and Children**

Examination of the baby after the first week of life is modified by growth and by the increasing importance of assessing development, in addition to detecting evidence of health or disease.

Ammoniacal dermatitis (nappy rash) due to urea in stale urine being split to ammonia may be seen and occasionally monilia infection affects the same area. Napkin rash tends not to affect inside the skin folds whereas monilia does so and scatters daughter areas of infection. Monilia is a common cause of stomatitis and may be seen in the mouth of affected babies as white spots which bleed on removal.

The development of various sensory functions is very rapid. Within hours of birth the infant can see a bright light to some extent and this ability rapidly improves so that she will “follow” a light when aged two months. Binocular vision and the ability to assess the position of an object in space (e.g. a rattle) is present by the age of six months and the ability to perceive and recognise colours by 2-3 years of age. Cataract is not rare in babies and should be looked for.

The ability to hear is present within the first day. It is relatively easy to test whether a baby hears a loud noise and responds but very difficult to assess the range of tones heard. When the baby is a few months old she will turn towards a sound such as a bottle clinking or a door shutting. The baby aged a few months has a wide tonal range of hearing. The young infant soon appreciates temperature differences, touch and painful stimuli. Motor development is slower but the deep tendon reflexes are present from an early age as are the cremasteric and abdominal reflexes.

The plantar responses are initially of an extensor type and do not become flexor until the age of walking (15-18 months).

At birth some primitive reflexes are present, such as the Moro reflex (a sudden extension of arms and legs on ‘alarm’, such as a loud noise, vibration or feeling of dropping), a “rooting” reflex with the mouth turning towards a touch like a nipple or teat, a grasp reflex of an object such as a finger and a walking reflex. All but the rooting reflex disappear by the age of three months. The ability to control the head and the neck when held prone or supine develops in the first few months (head control) and by the age of six months a baby with normal sight and motor development can reach out and grasp a toy, or remain seated propped up with only one pillow. By the age of one year the average baby can sit herself up, stand holding onto a support and crawl. Walking alone and saying single words may be accomplishments by one year or may not appear until aged 11/2 years.

Phrasing usually begins by the age of 18 months but is extremely variable in age of commencement, and may not be established even by 21/2 years in a normal baby.

Physical development must be taken into account. The average baby doubles her birth weight (3.2kg.) by six months, trebles it by one year and quadruples it by two years. Growth is no less spectacular from an average 50cms at birth to 75cm at one year. Height, weight and head circumference are plotted against standards on centile charts and if they lie between the 3rd and 97th centile and follow approximately the same channel this is satisfactory.

Excessive emphasis should not be placed on total weight or weight gain, but having said that, a baby who is not gaining weight is failing to thrive and a cause should be sought.

The primary dentition of twenty teeth usually begins with the incisors (6-9 months) and ends with the molars at 2 – 21/2 years.

Examination of a rapidly growing child must be related to the appropriate norms for her age. The average heart rate of 140/minute at birth does not fall to the adult values until puberty. The respiratory rate is similarly diminished from 40/minute at birth to 20/minute at 10 years. The temperature is much more labile than in adults and children can readily become pyrexial, especially in the first two years of life. Similarly in infants low values of less than 35°C are not unusual.

The anterior fontanelle, where the sagittal and coronal sutures cross, is normally "open" at birth, as are the sutures, to permit growth of the skull. The anterior fontanelle is felt routinely to determine its size and whether it is tense and bulging, normal or concave. Normally it closes by the age of 18 months but delay occurs in some diseases.

A bulging, tense fontanelle suggests underlying meningitis, hydrocephalus or subdural haematoma. Premature closure of the sutures leads to a range of abnormal skull shapes.

An essential part of infancy and childhood is growth and apart from relative length of head, trunk and limbs, the specific effects of vitamin deficiencies, such as infantile rickets and scurvy, are looked for.

The earliest sign of rickets is craniotabes (softening of the skull bones where the head is most often in contact with the bedding). This is usually the occipital area and a springing sensation similar to pressing a table tennis ball is felt when the skull is squeezed and released.

The ends of the shafts of the long bones become enlarged and are felt as thickened at the wrists, knees and ankles. Costo-chondral beading (rachitic rosary) is felt. The legs may be seen to be bowed, or "knock-knee" (genu varum or genu valgum) may develop. The child with scurvy has exquisitely tender limbs due to underlying subperiosteal haemorrhage.

### **Lymphatic System**

The lymphatic system of children, such as adenoids, tonsils, thymus and regional lymph glands, normally increase in size for the first five years of life and become smaller as puberty progresses. "Large" tonsils are normal in children and are not usually indicative of disease. Associated infection and cervical adenitis are more important. Large adenoids may be suspected when mouth breathing is seen or snoring reported and may be associated with postnasal drip and aspiration bronchitis.

### **Respiratory System**

Examination of the respiratory system should always include ascertaining the position of the trachea, since mediastinal shift readily occurs in children. The breath sounds are different from those of the adult, being harsh vesicular in type and often mistaken for bronchial breathing.

Practice is required not only in auscultation but in defining the position of the lung margins and of underlying viscera, such as the liver in babies and children at various ages.

The ears should always be examined since acute otitis media is common and foreign bodies and perforated drums are not uncommonly found.

### **Cardiovascular System**

The apex beat of the child is palpable inside the nipple line and usually in the fourth left interspace. The blood pressure of an infant is measured by the "flush" technique which indicates approximate systolic pressure. Thrills are felt as in adults and the heart sounds are auscultated normally with sinus arrhythmia and a third heart sound more commonly present.

The presence or absence of femoral pulses is always recorded; absent or weak pulses suggest the possible presence of a coarctation (narrowing) of the aorta. Blood pressure in older children is estimated by sphygmomanometry using cuffs progressively wider in size. Small cuffs give higher readings so the size must be recorded.

### **Abdominal Examination**

In infants and children not only does the scale alter on abdominal examination but specific tests are required such as the test feed for the presence of hypertrophic pyloric stenosis. ("Test Feed").

The infant is fasting, with the stomach emptied by gastric tube if necessary. The baby is fed lying supine on a table or cot in a warm room and her abdomen is exposed. A physician with warm hands sits or stands on the left side of the baby.

The upper part of the abdomen is gently palpated; as the stomach fills the abnormal pyloric sphincter is felt to be hypertrophied and like a "hazel-nut". The peristalsis of the enlarged stomach may be seen, transmitted through the abdominal wall as "waves" moving from left to right. Another specific test which requires expertise to carry out is jejunal biopsy for evidence of gluten enteropathy.

In the examination of the abdomen it is important not to handle repeatedly or roughly, any mass felt, particularly in the area of the kidneys, since this may be a neoplasm which can spread.

One finding almost unique to infants is an apparently spontaneous intussusception of gut. On palpation one feels an “empty” area and a mass which is the site of the telescoped gut. Observation of such a child, usually male and aged 3-15 months, indicates episodes of severe colic with pallor and crying and sometimes blood per rectum. (“Red currant jelly”). This intussuscepted mass may only be felt when the child has been anaesthetised. Routine examination of a boy includes palpation for the testes which may be undescended, ectopic or retractile. In the older child signs of the onset of puberty should be observed and recorded. This is very variable in onset but tends to begin in girls aged 8-11 years and boys aged 10-13 years. The presence of pubic hair and breast swelling or testicular and penile enlargement can be noted and assessed in comparison with charts which are available.

Finally two points are emphasised. The examination of the child is never complete until the urine has been examined for (at least) proteinuria, haematuria, glycosuria and pyuria. The young child cannot complain of urinary symptoms.

A child with pyrexia of unknown origin should;

- Have her urine cultured
- Have her blood cultured
- Have a lumbar puncture

*prior* to starting antimicrobial therapy.

# Psychiatric Case History

## Presenting complaint

- Patient's name
- Age
- Demographic information
- Reason for referral and by whom.

## History presenting complaint

- This is an account of the patient's history in their own words.
- Explore thoroughly what they presented with, for example, low mood, hearing voices, etc.
- Explore for other symptoms – mood, psychosis, anxiety
- Always think about risk – to health, safety or welfare to self or others

## Past psychiatric history

- Diagnosis
- When first referred to psychiatry
- Treatment by GP for mental illness.
- Current input – ? attends outpatient clinic, CPN, psychology, occupational therapy, 3<sup>rd</sup> sector support
- Previous treatments, dates given and what helpful
- Previous hospital admission
- Previous detentions under the Mental Health Act
- Previous DSH

## Past medical history

- Any significant past or current medical history

## Drug history

- Current medication
- Compliance
- Side effects
- Over the counter medication
- Drug allergies
- If appropriate, then past medication history

## Family history

First, ask a broad question to establish if anyone in the patient's family has suffered from mental illness.

- In cases of adoption or step-parents, note information regarding biological and social family.
- For all first degree relatives – mother, father, siblings, children – age, age of death (if deceased) and cause of death, history of mental illness, history of physical illness, occupation, quality of relationship with patient in childhood and thereafter.

## Social history

- housing – type of accommodation, any issues
- employment, source of income
- money worries – debt, money lenders, loan sharks, gambling problems, etc.
- smoking
- alcohol – amount, features of harmful use or dependency
- drugs – what substances used, amount, features of dependency

## Personal history

- history of birth trauma, place of birth
- family circumstances in childhood
- early (pre-school) childhood – developmental difficulties, bedwetting, temper tantrums
- history of physical or sexual abuse neglect, emotional abuse
- primary school – educational achievement, enjoyed/didn't enjoy, friends, trouble, suspension, expulsion, truancy
- secondary school - educational achievement, enjoyed/didn't enjoy, friends, trouble, suspension, expulsion, truancy, qualifications achieved, age of leaving school
- further education – adjustment, qualifications

- employment history – chronological list of jobs, how they were, relationships with colleagues, why they ended
- current employment – how is it
- relationships – past and present, significant, how long did they last, how were they, why did they end
- friendships – supportive, confiding?
- hobbies/interests
- religion

### **Forensic history**

- past and pending charges
- previous convictions
- previous imprisonment
- history of physical aggression, even if not charged

### **Premorbid history**

- ask the patient to describe what they were like before they were ill
- how would their friends describe them
- relationships – shy or makes friends easily, lasting or superficial friendships, few or many
- prevailing mood – generally cheerful or gloomy, changes in mood
- hobbies and interests
- how would they usually respond to stress

# Mental State Examination

## Appearance and behaviour

**Speech** rate, tone, volume

**Mood** high, low, euthymic, reactive, flat, blunted

## Thought -

- **Content:** delusions, overvalued ideas, what is on the patient's mind, any thoughts of harming self or others.
- **Form:** any disturbance in the flow of thought

**Perception** hallucinations in any modality

## Attention / Concentration

**Insight:** does the patient think they are ill, have a mental illness, require treatment or require hospital treatment?

## Summary

Two sentences summarising patient's name, age, demographics, significant clinical information, significant social information, anything else important in history.

## Differential diagnosis

1. Mood
2. Psychosis
3. Anxiety
4. Substance misuse
5. Organic
6. Personality
7. No mental illness

## Aetiology

- Predisposing factors
- Precipitating factors
- Perpetuating factors

## Investigations

- Biological/psychological/social

## Management

- Physical treatment
- Psychological treatment
- Social treatment

## Prognosis

The psychiatric case history may seem long in comparison with other histories. The student should try to empathise, i.e. 'feel oneself into' the patient's internal experience. Sometimes it is better to complete a case history over several shorter sessions rather than over one long one.

Patients may struggle to answer questions for many reasons - for example, they may be responding to auditory hallucinations, which are far more compelling to the patient than what a student or doctor is saying.

They may have persecutory delusions which cause them to be guarded or hostile, or they may be confused and disorientated. It is important to try to formulate such difficulties as giving valuable information about a patient's mental state rather than as a 'problem' because they don't give a 'good history'.

It is often helpful to get a collateral history from a friend or relative of the patient. For children, adolescents and people with learning disabilities, getting information from an informant such as a parent is essential.

## Psychiatric “Systemic” Enquiry

Although there is no such thing as a ‘systemic enquiry’ in psychiatry, it can be useful to have a set of questions about mood, psychosis and anxiety to explore the patient’s symptoms.

### Mood disorders

#### Depression

- How have you been feeling in yourself recently?
- Is your mood constantly low?
- Do you have good days as well?
- When did this start?
- Is there any reason you’re feeling low?
- Does your mood vary throughout the day?
- Do you find yourself tearful?
- Does anything help lift your mood?
- Does anything make it worse?
- How’s your sleep?
- Have you got any trouble getting off to sleep?
- How long do you lie awake for?
- Is your sleep disturbed through the night?
- Do you wake early in the morning?
- What time? (early morning wakening –two hours before normal)
- What has your appetite been like recently?
- Have you had any weight loss?
- How much? Over what time period?
- What’s your concentration been like recently? Can you read a magazine/ watch TV?
- How are your energy levels? Do you seem to be slowed down or tired?
- Has there been any change in your interest in sex?

- Is there anything you’re enjoying doing at the moment/ Have you lost interest in things you used to enjoy?
- How’s your self esteem? What is your opinion of yourself, compared to other people? Do you feel inferior or worthless?
- How are your confidence levels? Is there anything weighing on your mind? Do you have a sense of guilt about anything?
- What do you look forward to? How do you feel about the future?

#### Suicide and deliberate self harm

Have you ever felt so low that you have harmed yourself in any way? Do you ever feel so low that you felt that life is not worth living? Have things seemed so bad that you’ve felt like ending it all? Have you ever thought about ways that you might kill yourself? Do you think you would ever carry out these plans?

It can feel really difficult to ask questions about suicide. There is no evidence that asking about suicide increases the likelihood of a patient carrying it out. It can sometimes really help a patient to talk about their suicidal thoughts.

#### Elation

Have you felt that your mood is better/ higher than usual recently? Have you felt more cheerful than usual lately? How are your energy levels at the moment? Do you find you’re being more active than usual? Is it hard for you to relax? Do you feel able to achieve more than usual in a day?

How is your sleep? Have you been sleeping less than usual? Do you find you’re ‘burning the candle at both ends’?

How is your concentration at the moment? Are you able to read a magazine/read a newspaper/watch a TV program? Can you do this without your mind wandering?

Do you feel as if your thoughts are racing? Do you find your thoughts are coming faster than usual? Do you find you're having lots of good ideas at the moment?

Do you feel you have any special abilities or talents (grandiose ideas)?

## Psychosis

### Delusions

- 'A delusion is a false, unshakeable idea or belief which is out of keeping with the patient's educational, cultural and social background; it is held with extraordinary conviction and subjective certainty.

Sim 1988

The patient will not usually recognize their delusional thoughts to be a feature of their illness and so it's not usually possible to ask, "Have you any unusual thoughts?", for example, and get an informative answer.

Often a patient's delusional beliefs become apparent over the natural course of the psychiatric case history but it's good practice to start with a couple of open questions and know how to ask questions about a few specific types of delusions.

**Open questions** - Is there anything particularly on your mind? Has anything strange or unusual happened to you recently?

**Persecutory delusions** - Do you ever feel that people are talking about you behind your back? Do you feel that people are watching you? Do you ever feel that people are trying to harm you? Do you think there is a conspiracy against you?

**Delusions of reference** - Do you ever feel that the television or radio has specific messages for you only? Do you feel that they are speaking only to you? Do you see any reference to yourself in the TV or newspapers?

**Alienation of thought** - Can you think clearly or is there any interference with your thoughts?

**Thought insertion** - are thoughts put into your head which are not your own?

**Thought withdrawal** - do thoughts ever seem to be taken out of your head as if some external force or person were removing them?

**Thought broadcast** - are your thoughts broadcast so that other people know what you are thinking? Do you feel that your thoughts are available to others?

### Passivity phenomena

Do you ever feel under the control of some force or power other than yourself? So you feel as though you are possessed by someone or something else? What is that like? Does this force make your movements/influence your emotions/make you say things you don't want to say without you willing it? What's the explanation for this?

## Hallucinations

A hallucination is a perception in the absence of an external stimulus. They are subjectively indistinguishable from a normal stimulus and can occur in any modality.

- **Auditory hallucinations**

Do you ever seem to hear voices or noises when there is no one about and nothing else to explain it? Do you hear the voice through your ears or inside your head? Are they as clear as me talking to you know? What do they say? How many voices do you hear?

Does the voice talk to you or about you? Do they comment on what you are doing? Do you hear your thoughts spoken aloud? Do they command you to do things? Can you resist them or do you feel compelled to act? Are you able to make them go away?

## Anxiety

The symptoms of anxiety can be split into physical symptoms, cognitive symptoms and behavioural symptoms. It's good to start with some open questions.

- **Open questions**

Do you find you've been feeling nervous or uptight recently? What kind of things make you feel like this? Do you feel like you're always on edge?

- **Physical symptoms**

How do you feel physically when you're feeling anxious? Do you feel short of breath/heart racing/butterflies in your stomach/sweaty palms/dry mouth/shaky? Do you find you can't sit still? Do you find it hard to relax?

- **Cognitive symptoms**

What kind of things are on your mind? What do you worry about? Are you able to distract yourself from your worries? Are these worries there all the time or only in certain situations?

## For Differential diagnosis

– do you find unpleasant thoughts coming into your head when you don't want them to? What are these thoughts? Do you try to resist these thoughts? Do you recognize them as your own thoughts? How much of the day do you spend thinking about these?

# Behavioural Symptoms

Is there anything you avoid doing because of your anxiety? What impact does your anxiety have on your life?

For compulsive rituals, do you do anything in order to get rid of these unwelcome thoughts? What do you do? Do you have to repeat these actions over and over again? Do you feel compelled to carry out these rituals even though you don't get pleasure from them? Do you get anxious if you do not carry out these rituals? What happens if you try to resist these rituals? What do you think would happen if you didn't carry out these rituals? How much of the day is spent on these rituals?

## **Panic attacks**

Have you ever had a situation where you were overwhelmed with fear, had a racing heart and difficulty breathing? What was it like? What were your thoughts? How often do you have these episodes? Is there any trigger to these episodes?









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