Chapter

1

Introduction

It is customary that the 1st year curriculum at the medical school begins with a study of anatomy through laboratory dissection, and its processes at the molecular and cellular level. Along with this embryology, genetics, cellular biology, biochemistry and physiology are also taught concurrently in this time span of 1st year.

In different parts of the world, it is observed that from the 1st year study of *Essentials of Clinical Medicine (with foundation of medicine)* has been included in the curriculum which is an introduction to clinical medicine, including basic patient interview and hypothesis-driven physical examination techniques. In many countries, physician-patient-society-system (P2S2) with clinical skills and doctor–patient relationship are taught. Essentials of Clinical Medicine teaches the art of taking history of medicine, continues the clinical skills development and critical thinking, and explores ethics and professionalism. Thus, it is unequivocal and leaves no doubt that undergraduate students should be well-conversant with basic clinical medicine from the earlier days in their medical school which will help them to build the foundation of medicine in future.

This monograph, which will guide the students extensively to understand a difficult science like medicine, should be completed within first 1 to 2 years in medical school. Students should try to corroborate the clinical link of anatomy, physiology and biochemistry (e.g., the applied anatomy) with the living patient holding the hand of 'clinical medicine'.

PROLOGUE

INSTRUMENTS/TOOLS/APPLIANCES TO CARRY IN THE CLINICAL ROTATION

1. Stethoscope, preferably double-tube
2. Blood pressure machine (aneroid or spring dial type, as it is smaller and lighter)
3. Percussion hammer
4. Pencil torch
5. Tongue depressor (or, spatula)
6. Pins, cotton, measuring tape, skin pencil, clinical thermometer
7. Apron (preferably, half-sleeve).

All the kits should be kept in a small and handy plastic box blended with *intense desire to learn and thirst for knowledge* from the very first day.

KNOW YOUR HOSPITAL

Just try to be acquainted with the 'world of sufferings and illness'. Remember, your hospital is a temple where you are a simple priest; so maintain its sanctity.

KNOW THE CROWD IN YOUR HOSPITAL

They are either the patients or their relatives/accompanying persons/third party. Hospital staffs are always there to extend their help to this crowd who seeks help.

KNOW YOUR TARGET

A great son of India, a Bharat Ratna, Dr Bidhan Chandra Roy (Dr BC Roy), MD, MRCP, FRCS once commented that you doctor may treat your patients by allopathy, homeopathy or naturopathy but you should always keep some 'empathy' for them. Learn the subject and translate it into 'healing touch' for the patients.

KNOW YOUR TEACHER

He/she is an experienced and trusted adviser. He/she is your educator, pedagogue, instructor, tutor, master, and remember he will be your ultimate mentor. In the medical field, a teacher holds the position of a 'parent outside the home'.

KNOW YOUR PATIENT

The patients are the living pages of your book.

They are cured by receiving treatment from team of doctors, while the medical students are being benefitted by the sufferings of the patients (a mutual exploitation!).

KNOW YOUR STETHOSCOPE

It was discovered in the year 1816 by a French physician named RTH Laennec (1781–1826). Worldwide, stethoscope symbolises a doctor. It has four parts like:

1. *Chest piece:* It has two parts, i.e., diaphragm (larger round part) and bell (smaller round part or conical part). The diaphragm helps to hear the different heart sounds, breath sounds, murmurs, etc. The bell is for low-frequency sounds like third or fourth heart sounds, foetal heart sounds, or murmur of mitral stenosis. In the initial days, a student may find difficulty to listen sounds with a bell, and thus they are advised to use the diaphragm more in clinical classes. Stethoscopes from renowned companies like Littman, Sprague or Leatham give better audibility (and, costly too!) in all variety of sounds (Fig. 1.1).
2. *Connecting tube:* A single or double tube connects the head piece with the chest piece.
3. *Head piece:* There are two metal tubes in the head piece which are attached together by a metallic U-connector.
4. *Ear piece:* Two plastic ear pieces are attached in two metal tubes of the head piece. Place the ear pieces in such a way, so that they are in the same line with your external auditory canal (actually needs a little practice for a few days).

Fig. 1.1: Stethoscope

KNOW YOUR PERCUSSION HAMMER

This medical instrument was first used to examine the knee jerk (tendon reflex) to become a regular part of neurological examination, thus it is also known as patellar hammer (Fig. 1.2). It may be of rounded (plastic shaft with rounded rubber to strike) or conical (metallic shaft with conical rubber to strike) variety. It is basically used in patients of neurology to examine the deep reflexes (i.e., jerks), superficial reflexes (abdominal reflex or plantar response is examined by the blunt tip present at the end of the shaft), or fasciculation.

Fig. 1.2: Hammer

KNOW THESE LEGENDS AS WELL AS THE MEDICAL SYMBOLS/TERMS

There are many names/figures in history of medicine like Charaka and Sushruta, Hippocrates, RTH Laennec, WC Roentgen, Robert Koch, Sir William Osler, Willen Einthoven, Edward Jenner (discoverer of smallpox vaccine, the world's first vaccine), Ronald Ross (discovered life-cycle of malaria parasite), Alexander Fleming (discoverer of the world's first antibiotic, penicillin), Godfrey Hounsfield and so on, who have reduced the sufferings of the mankind by their outstanding skills and thereby saved crores of lives (Figs 1.3 to 1.10).

Fig. 1.3: **Charaka and Sushruta**—the pioneers in developing the medical science in ancient India

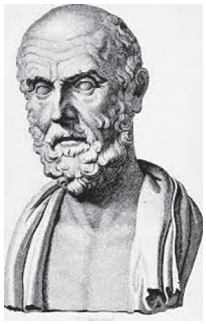

Fig. 1.4: **Hippocrates** (460–375 BC)—ancient Greek physician, known as 'Father of Medicine'

Fig. 1.5: **RTH Laennec**—the French physician who is the inventor of stethoscope in 1816

Fig. 1.6: **WC Roentgen**—the German mechanical engineer and physicist who discovered the X-ray

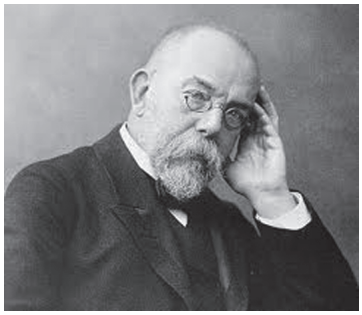

Fig. 1.7: **Robert Koch**—the German physician who discovered the cause of tuberculosis, the *Mycobacterium tuberculosis*

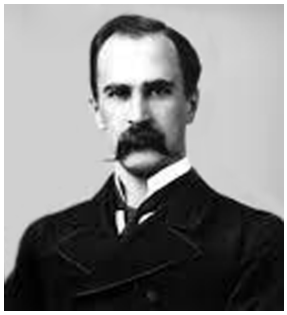

Fig. 1.8: Sir William Osler—the Canadian physician, known as 'Father of Modern Medicine'

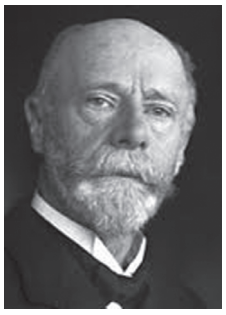

Fig. 1.9: Willem Einthoven—the Dutch doctor who invented the electrocardiography (ECG)

Fig. 1.10: Godfrey Hounsfield—the British electrical engineer who discovered computed tomographic (CT) scan

It is desirable that one student should be acquainted with different 'medical symbols in practice' like Caduceus, Asclepius and the Red Cross (Figs 1.11–1.13).

WHO (World Health Organisation), Geneva, Switzerland is the directing and coordinating authority for health within the United Nations system that is concerned with international public health. The goal of WHO is to build a better and healthier future for people all over the world.

Fig. 1.11: The twin serpent, winged staff—Caduceus is the 'symbol of medicine'

Fig. 1.12: Asclepius—the God of medicine and healing

Fig. 1.13: The Red Cross—an international philanthropic organization (Red Cross Society) that cares for the wounded, sick, homeless in wartime, and during and following disasters (according to the Geneva Convention of 1864). The red cross sign should not be used by doctors, hospitals or in first-aid box

INTRODUCTION

In clinical medicine, the patient holds the key position; a 'patient' is one who feels sick physically or mentally, and seeks help of doctor for relief of his/her ailments. Clinical diagnosis is an artistic science, based on three pillars like:

1. History taking (inquiry),
2. Physical examination, and
3. Investigations

Clinical medicine deals with history taking and physical examination, jointly known as clinical examination. Medical events that have already taken place as well as taking place are known as 'history'; *history taking* is an art and is to be learned over years dedicating time at the bedside of the patient keeping patience in mind. In majority of cases, history alone can give clue to diagnosis (approximately, 75%), and builds up the beginning of a doctor–patient relationship. While examining the patients day by day, a doctor develops the keen 'power of observation' and tries to associate different observations and findings to penetrate the diagnosis, which is known as 'clinical eye'. Clinical medicine is otherwise considered as 'approach to the patient at the bedside'. A successful clinician must have sharp 'clinical acumen'.

The clinical state of the patient at the given time is determined by *physical examination*, which is divided customarily by four techniques into inspection (looking), palpation (feeling), percussion (tapping), and auscultation (listening). The physical examination using these four modalities like inspection (minute observations by your eyes), palpation (feeling by your hands), percussion (tapping by fingers or a percussion hammer), and auscultation (hearing different sounds by a stethoscope) are skills acquired by a student over years of sincere training, which also provides the physical contact that communicates a doctor's caring/healing touch to the patient, and helps to build up a doctor–patient relationship. In bedside clinical examination, the physicians use their senses along with traditional tools like stethoscope, sphygmomanometer (i.e., blood pressure measurement machine), thermometer, percussion hammer, measuring tape, etc. to understand and assess the patient, and to find out normal and abnormal signs. Diagnosis of a disease becomes very easy if one bridges basic medicine and clinical medicine.

Appropriate *investigations* assist the clinician to confirm the diagnosis made by clinical examination. Investigations like blood sugar/urea/creatinine, routine examination (R/E) of urine, sputum for AFB (acid-fast bacilli), different radiology (X-ray, ultrasound, CT scan, MRI scan), or even tissue biopsy helps to arrive at a definitive diagnosis. A student must learn to ask for 'rational investigations' related to the patient than to order for 'all investigations'.

Fig. 1.14: The first picture is of Adolf Hitler and the second one is of Charlie Chaplin, where the hairstyle and the hat-style are sufficient to recognise them though the moustache-style is similar. Clinical medicine is just like this—one has to learn to diagnose diseases by the symbolic expression

It is an old connotation that 'doctors know more but see less'. Thus, remember these lines from the beginning of clinical training: *there is no substitute for watchful eyes, alert ears, and tactful fingers in a logical mind* (Fig. 1.14).

ADVICE TO BEGINNERS STARTING CLINICAL ROTATIONS

Try to learn the vocabulary and grammar of medicine. Clinical medicine cannot be learnt by sitting, reading and cramming in hostel room. If you want to be a driver, you

have to sit on the driver's seat for learning with a trainer by your side; ultimately you watch and learn from the trainer driver. Clinical rotations are like this—you have a trainer (i.e., your teacher) who guides you in every aspect and teaches you hand to hand. Remember, you cannot learn the lessons of a driver by seating in the backseat of the car. Sometimes, to learn within a short span of clinical hours, you have to be aggressive and pushy.

Select your 'learning objectives'. Usually there are 1–2 good textbooks on clinical medicine. Ask your teachers, seniors and other students which one they recommend for you. Start with a basic clinical textbook with overview of the clinical topics along with a practical orientation.

Your strategy must be clear. Try to chalk out the major clinical topics and take regular class notes on them. You need not read the chapters in the order mentioned in the book, rather read them as you see patients in clinical classes. Be sure that all the topics are covered during the rotation time; if needed, request your teachers repeatedly from junior to senior ones.

Come early to the hospital, keep moving around in search of patients (so called 'cases'), and stay late if you want to be a professional in future.

Do not miss a single clinical rotation day, whether your teacher is good or bad. Remember, a very bad teacher knows more than you. Come with your apron (half-sleeve), stethoscope, hammer, torch, etc. Be polite, smart, gentle and courteous in your behaviour at the bedside. Be empathetic to your patient while taking history. Do not harass a patient who is in agonising abdominal pain or breathless. Do not hurt your patient physically or mentally; be careful about patient's physical and emotional needs, which enormously help to build-up the doctor–patient relationship. Always remember that you are a trainee and thus it is not wanted that you will divulge the prognosis (i.e., outcome or course of a disease) to the patient or his/her relatives.

Do not show-off in front of your patient. Make it a regular habit to read at home what clinical teaching you have received in the morning wards and just see by this way you can cover a major section of different diseases. 'Two is company, three is a crowd'—the proverb is very true, and thus always try to select 'a friend' or 'a classmate' who is at par with you in many aspect only to accompany you in the clinical wards; it is the task of a student to attain the evening round, either alone or with his/her friend to see new patients admitted, or the same patient which were taught in the morning round. You can open your clinical book by the side of the patient and can corroborate point to point with the patient what is written in the book. Practice 'history writing' repeatedly, and remember rehearsal of final examination starts from very first day of your clinics.

Do not rush to every Tom, Dick and Harry 'cases'. Stick to the 'must know' areas (e.g., details of anaemia) though you may peep through 'desirable to know' areas (e.g., exposure to cold may precipitate Raynaud's phenomenon in a patient suffering from scleroderma) but totally avoid 'nice to know' areas (e.g., pneumonoultramicroscopic-silicovolcanoconiosis is the largest medical word in the Oxford dictionary) in your earlier days of clinics.

Try to observe the black, tarry and offensive stool of melaena (do not hesitate to go to the bathroom with proper permission), coffee-ground vomiting of carcinoma of the stomach, rice-watery stool of cholera, turbid chalky-white urine (present in the urosac)

of urinary tract infection, or sputum mixed with blood i.e., haemoptysis (just have a look in the sputum-bowl). Always take the opportunity to observe the procedure of inserting IV drip (Fig. 1.15) (i.e., device used for intravenous fluid infusion), blood transfusion or urinary catheterisation, Ryle's tube introduction, lumbar puncture to collect CSF, paracentesis thoracis (i.e., tapping of pleural fluid) or nebulisation in a patient with respiratory distress in the medical ward. Try to learn these from the very first day of your clinical training as much as you can; that means you should be passionate to learning during your clinical posting days.

Fig. 1.15: Patient of gastroenteritis receiving IV saline drip in a city hospital—a very common picture in the hospital

Every day, a student will have to learn many new medical terms at the beginning like 'agammaglobulinaemia', which means 'absence of gamma globulin in blood'—where 'a' means absence, 'mia' means 'related to blood'. One student should also be acquainted with the new terminologies in health care system for intensive treatment in medicine like ICU (Fig. 1.16) (intensive care unit), ITU (intensive therapy unit or intensive treatment unit), CCU (critical care unit), NICU (neonatal intensive care unit), PICU (pediatric intensive care unit), SICU (surgical intensive care unit), HDU (high dependency unit), ANCU (acute neuro critical care unit) and MICU (mobile intensive care unit). The common lethal conditions treated in ICU are ARDS (acute respiratory distress syndrome), trauma, head injury, multi-organ failure, and especially sepsis. Every student should know the common gadgets [e.g., pulse oximeter (a spectrophotometric device that measures arterial oxygen saturation i.e., SpO_2), cardiac monitor (a device that shows the electrical and pressure waveforms of the cardiovascular system for measurement and treatment) etc], used in different types of ICUs.

A student should be conversant with three common terms in day-to-day use like 'iatrogenic', 'aetiology' and 'idiopathic'. Iatrogenic means 'doctor-made' or 'treatment-made' i.e., a drug-reaction in a patient is iatrogenic. Aetiology means 'the cause' e.g., one of the aetiology of pleural effusion is tuberculosis. Idiopathic means 'the cause is unknown' i.e., if the cause of a disease is idiopathic or unknown, it is obviously very difficult to treat, and that is why it is told that it is idiotic to the part of the doctor and pathetic for the future of the patient.

Fig. 1.16: An ICU (intensive care unit) for treatment of severe and life-threatening illness

Two other important terms are 'acute' and 'chronic' in the medical science. For better

understanding, a student may consider 'sudden' as acute and 'a condition which is persisting for a long time' as chronic. Progress of a disease may be rapid, or insidious, i.e., proceeding in a gradual or subtle way. 'Placebo' is a term which means a substance containing no medication and prescribed or given to reinforce a patient's expectation to get well by psychological benefit to the patient rather than for any physiological effect (a functional or non-organic pain may sometimes be cured by injecting distilled water by intramuscular route).

The subject of Medicine is full of 'syndrome'. Do not be afraid, it is nothing but 'group of symptoms' or 'symptom complex'.

At the same time, one beginner should know what makes 'informed consent' from a patient; it is a process for getting written permission before conducting a healthcare intervention on a person (e.g., a pleural aspiration in pleural effusion or a splenic puncture in diagnosing chronic kala-azar). One student is expected to learn the skill to 'breaking a bad news' to the patient or their relatives clearly, honestly and sensitively which is one of the most difficult duty of a physician (e.g., to cancer patients about their illness). It is mandatory to remember that a code of ethics binds the doctor to certain modes of conduct in the relationship either with a patient or with colleagues. That is why, some idea should be acquired about the incidences of 'medical negligence' or 'medical malpractice' (i.e., treatment below the accepted standard and/or causes injury or death to the patient), which is a punishable offence by a doctor. Make a habit of keeping patient's records from student life, either in hard copy or in soft copy, which will be enormously helpful in future life.

It is known that practice makes a man perfect. So communicate with your patient repeatedly as you were taught by your teacher at the bedside to write a good and comprehensive 'history'. It is often told by eminent clinicians—'go to the patient, listen to him repeatedly, and see that he will give you the diagnosis'. Everyday, try to learn some 'bedside manners' from your teachers. Now, give a look through the investigations and treatment file to have a complete knowledge about the disease. One must admit that a clinician dedicates minutes after minutes, hours after hours, and days after days at the bedside to become a true professional. It is the positive attitude which helps to attain a good communication skill.

Rapid development in biomedicine and information technology is ushering a new age of medicine; artificial intelligence, genome editing, tissue engineering are just a few of the frontier fields that are changing the practice of medicine. Remember, all are required in the life of a physician but as a physician, first try to learn the art of clinical medicine by going at the bedside and secondly by comforting the patient.

Lastly, one student should have some idea about euthanasia. Euthanasia is also known as assisted suicide, doctor-assisted dying (suicide), or "mercy-killing" of terminally ill patients. There are different euthanasia laws in each country. In India, passive euthanasia is legal under exceptional circumstances (e.g., withdrawal of life support to patients who is in a permanent vegetative state) but active euthanasia (i.e., intentional act of causing the death of a patient experiencing great suffering) is illegal.

You have no holiday during your clinical posting though pauses are vital in life. Remember, 'All work and no play makes Jack a dull boy' that means though hard and laborious work is necessary to achieve our goals in life but concentration on work alone with no recreation tends to make a person dull and unsociable. Thus Osho once told 'life is a balance between rest and movement'.

Remember these points as a newcomer in the field:

1. Set your goals
2. Prepare study notes on a regular basis
3. Do not use too many study resources
4. Clear your queries from your teachers or seniors
5. Regularly attend clinical classes
6. Revision
7. Give some clinical mock test in the presence of your teacher.

According to Bloom's taxonomy, there are three domains of educational activities which should always be remembered by a student:

- *Cognitive (domain of the brain):* Knowledge
- *Psychomotor (domain of the hands):* Skill
- *Affective (domain of mind, feelings, emotion):* Attitude

So, in the summary show some professionalism by maintaining the following facts: Communicate sensitively, maintain patient's dignity, convey thanks to your patient and explain conclusions to the patient, if needed. Try to give your 'human touch' so that a 'case' is converted into a 'patient', and ultimately becomes 'healthy, physically and mentally'.

Be an empathetic listener of your patient. Try to learn the effective communication and interpersonal skills. Have faith and believe in yourself as well as your abilities. With a boundless vision, determination, motivation and dedication anything is achievable by any student.

Before starting your journey to clinical medicine, remember these golden words of Sir William Osler, the father of modern medicine, ".... Medicine is learned by the bedside and not in the classroom. See, and then reason and compare and control. But see first.", and try to take the essence of the comments of the legend told more than 100 years back that "The good physician treats the disease; the great physician treats the patient who has the disease."

Congratulations!

Enjoy being a real doctor and try to serve the community.

A SCHEMATIC HISTORY: GENERAL PRINCIPLES

Interrogation of the patient to gather maximum possible information is the first and foremost part of clinical evaluation. History taking, which is an immensely skilled technique and requires a lot of trial, remains the essence of medical practice. The inquiry (i.e., history) of the patient precedes both clinical examination and treatment. Clinical methods are the skills in clinical practice a doctor achieves during examination of a patient by a combination of study and experience; bedside manners are taught by clinical teachers, and this is how the 'bedside clinical medicine' is learnt (Fig. 1.17). Try to evaluate the patient as soon as he/she enters the consultation room i.e., how the patient walks, interactions during conversations, body language, etc. can give vital clinical clues. Call the patient by name and interrogate by asking "What is your problem?" or 'How can I help you?" Put the patient at ease and encourage him/her to talk freely. Allow the patient to tell their story without interruption because a sympathetic listening instils confidence in the treating doctor and establishes a good

doctor–patient relationship. Be polite, humble and respectful in behaviour, and professional in dress. Always maintain the patient's privacy and dignity. The surrounding area and staffs of the hospital/clinic should be sensitive and patient-friendly. In all sense, be an attentive listener and behave friendly. Do not hurt the patient's religious belief. Try to assess the patient's mood, anger, anxiety or frustrations arising out of the disease. Many patients speak either too much (garrulous) or too little but an intelligent doctor knows how to extract the best out of it, and it is achieved only by repeated practice at the bedside.

Fig. 1.17: Bedside clinical demonstration of symptoms and signs

If the patient is non-communicable (cannot speak, confused, abusive, emotionally disordered or unconscious), take the help of accompanying persons, or a relative, or a third party to collect information. Negative points are very important in history taking [e.g., absence of history of haematemesis (i.e., blood coming out with vomiting) in a patient of cirrhosis of liver often indicates a good prognosis (i.e., outcome), which points out that oesophageal varices is yet to be formed, or formed but not ruptured yet]. While assessing pain anywhere in the body, give the patient an arbitrary 'pain scale' from 1 to 10, where 1 is very mild pain, while 10 is the severest pain. Try to discourage pseudo-medical terms delivered by the patient like allergy, sciatica, stroke, pleurisy, etc. Highly-sensitive issues like marital disharmony, sexual disorders, substance abuse, and mental derangement should be asked at the last part of history taking. At the first hand, try to avoid 'leading questions', which are very specific and their answer remains between 'yes' and 'no'; but in a patient with central chest pain which is radiating to the left hand may be asked by a leading question like 'is the pain increases with exertion?', while an affirmative answer points towards coronary heart disease and helps in diagnosis.

Do not violate the privacy of the patient for any reason. Maintain the confidentiality which is essential for therapeutic relationship. Never break the 'trust', which is the strongest bondage between treating physician and ailing patient.

In spite of recent boom in investigational facilities, history taking and physical examination remain the essential skills of the attending physician.

SUGGESTED SCHEME FOR HISTORY TAKING SEQUENCE

1. ***Particulars (biodata) of the patient:*** Name, age, sex, race/religion, occupation, address, date and time of admission, date and time of examination
2. ***The history proper***
   - Chief (presenting) complaints
   - History of (H/o) present illness
   - Past history
   - Family history

- Personal and social history
- Treatment history
- Psychiatric history
- Menstrual and obstetric history in women

3. ***Physical examination***
   - *General survey:*
     - Level of consciousness: Whether alert, oriented and co-operative
     - Apparent age
     - Decubitus
     - Build (built)
     - Nutrition (and assessment of body mass index or BMI)
     - Facies
     - Pallor (or anaemia)
     - Cyanosis
     - Jaundice
     - Neck vessels (internal carotid artery and jugular veins)
     - Lymph nodes
     - Thyroid gland
     - Clubbing
     - Koilonychia
     - Pulse
     - Blood pressure (BP)
     - Respiration
     - Temperature
     - Oedema
     - Skin, hairs, nails
     - Skeleton: Height, weight, arm-span, upper segment–lower segment ratio
     - Any obvious deformity (e.g., swelling of abdomen) or outstanding features (e.g., asymmetry in face due to Bell's palsy)
     - General observation: Any acute distress present or not
     - Handedness (right, left, or ambidextrous) with level of intelligence (average, low, high)
     - *Others:* Breasts, hydration, bony tenderness
   - *Systemic examination:*
     - Cardiovascular system (CVS)
     - Respiratory system
     - Gastrointestinal (GI system) and hepatobiliary system
     - Genitourinary system
     - Nervous system
     - Haemopoietic system/lymphoreticular system
     - Musculoskeletal system/locomotor system (optional)

*Always begin with general survey, followed by system review

4. ***Summary of the case:*** Construct two paragraphs encompassing short history with clinical findings in 5–6 sentences

5. ***Provisional diagnosis (P/D):*** Most probable diagnosis considering history and physical examination
6. ***Differential diagnoses (D/D):*** Consider other possibilities in the similar scenario
7. ***Relevant investigations (optional):*** Rational investigations targeting final diagnosis

HISTORY TAKING

1. ***Chief (presenting) complaint:*** Ask the patient directly about his/her problem for which he/she presents to the doctor or hospital. Note down the complaints in patient's own words avoiding medical terminologies ('coughing out of blood' is preferable to 'haemoptysis').
   Record the presenting symptoms with duration (from longest to shortest duration), in chronological order of their appearance in patient's own words.
   Following are the common presentations which result in urgent hospital admission: Chest pain, respiratory distress (breathlessness), fever (pyrexia), pain in the abdomen, loss of consciousness or impaired cognition, weakness of the body (hemiplegia or paraplegia), haematemesis and/or melaena, haemoptysis, severe vomiting and diarrhoea.
2. ***H/o present illness***
   - Chief complains are expanded here in relation to onset (acute, subacute, insidious), progress or course of illness (progressive, static, with remissions and relapses), and duration. The common examples of acute onset within hours is a vascular lesion (i.e., cerebrovascular accidents or CVA)/acute myocardial infarction (AMI) or respiratory distress, subacute onset within days or weeks is infection/inflammation/burning micturtion, while insidious or very slow onset occurs in neurodegenerative disorders, i.e., Parkinson's disease.
   - Positive, plus important negative symptoms (e.g., absence of paralysis in disorders of nervous system, or absence of chest pain in cardiovascular illness) should be recorded.
   - It is better not to use leading questions though it is often required for sensitive history taking. Avoid scientific terms (joint pain is preferable to arthritis).
   - Pain (site, radiation, character, severity, duration, relieving and aggravating factors, associated symptoms) and fever (range, axillary or oral, intermittent/continued/remittent, diurnal variation, chill and rigor, sweating, associated headache/malaise) should be uncovered in details.
   - Record symptoms referable to other systems (e.g., confusion in nervous system occurs in a patient of cirrhosis of liver who develops hepatic encephalopathy) and relevant associated symptoms (e.g., drenching sweat in hypoglycaemic coma).
   - Basic general symptoms (should be recorded in every patient): Appetite, loss of weight, fatigue, sleep, bladder and bowel.
3. ***Past history:*** Ask about previous illness (enlist in chronological order from infancy, if possible), H/o illness recurring in nature (e.g., epilepsy), operations, accidents or admissions to hospital. Note the following points while recording past history:
   - Specific diseases like tuberculosis, rheumatic fever, malaria, kala-azar, jaundice, epilepsy, ischaemic heart disease (IHD), systemic hypertension, diabetes mellitus, STD (sexually transmitted diseases like gonorrhoea, syphilis, AIDS).

- H/o travel abroad (or disease-prone areas), blood transfusion, operations, injury, major psychiatric illness in past.
- Childhood illness like mumps, measles, chickenpox, whooping cough, poliomyelitis; birth history (asphyxiated or not), H/o umbilical sepsis (may lead to portal hypertension in adolescence), immunisation and different vaccinations history taken from the parents.
- *H/o contact* with persons suffering from tuberculosis or any contagious disease.
- *H/o exposure* (sexual) to STD or any H/o promiscuous sex.

4. ***Family history:*** It includes 'first degree relatives' (parents, children and siblings) but in a broader sense all 'blood-relatives' (grandparents, parents, brothers, sisters, uncles, nephew or niece) comes within family history.
   - Does anybody suffer (or suffered) from similar type of heredofamilial diseases like thalassaemia, haemophilia, schizophrenia? Is there any sufferer from diseases of multifactorial inheritance like hypertension, diabetes, IHD, bronchial asthma, epilepsy or migraine?
   - Any sufferer from communicable diseases (e.g., chickenpox, mumps, measles, tuberculosis) at this point of time due to unavoidable H/o contact within the family?
   - Any H/o 'consanguineous marriage' (i.e., marriage among relatives) within the family (may give rise to hereditary autosomal recessive diseases like 'inborn errors of metabolism')?
   - Cause of death of 'first degree relatives' (with age) should be recorded. Try to construct the family tree with 'pedigree chart' (symbolic diagram in construction of a family) reflecting the pattern of inheritance.

   (**NB:** Genetic counselling is the method by which the patients, who are at risk of an inherited disorder, are explained of the outcomes, the probability of transmitting it to the next generations, and the options given to them in management and planning of family.)

5. ***Personal and social history:*** These include H/o the patient, spouse and children only.
   - Personal details e.g., level of education (gives an indirect idea of social status), occupation in various stages of life (e.g., working in coal mines for a long duration may give rise to coal workers' pneumoconiosis, or leptospirosis in paddy field workers), marital status with number of children (ask for health of spouse and children), dietary habit, addiction (e.g., smoking, alcoholism, or drug abuse; or 'substance abuse' like consumption of cocaine, heroin, LSD, 'recreational drugs', tobacco or alcohol'. Try to estimate the amount of consumption of tobacco and/or alcohol), daily lifestyle (hobbies, pets, sedentary or an active life, travelling, sleep, bladder, bowel, marital relationship, sexual history), and ethnic background (e.g., thalassaemia) are considered in personal history.
   - Income and social status should be asked in a decent way. Dietary habit is to be asked to diagnose avitaminosis, malnutrition or obesity; whether a vegetarian, or non-vegetarian, or consumes mixed Indian diet?
   - Record any H/o 'high risk behaviour' i.e., IV drug abuse, multiple unprotected sexual exposure, homosexuality may acquire disease like hepatitis B or C infection,

subacute bacterial endocarditis (SBE) and AIDS. 'Needle sharing' may acquire abscess/cellulitis, thrombophlebitis, hepatitis B or C or HIV infection, or right-sided infective endocarditis.

6. ***Treatment history:*** Following are taken into consideration:
   - Treatment received so far for the present illness; any drug resistance?
   - Regular use of drugs for treatment of diabetes, hypertension, epilepsy, rheumatoid arthritis, or oral contraceptives. Any H/o blood transfusion, anaesthesia or surgery in the past? Ask for total knee replacement, cochlear implant, valve replacement, or pacemaker implantation.
   - Record any H/o allergy or drug reactions (from penicillins, sulphonamides, pollen, metal, etc).
   - Details of use of NSAIDs (non-steroidal anti-inflammatory drugs), which may give rise to acute gastritis, haematemesis or renal toxicity. Corticosteroids used for prolonged period (e.g., for rheumatoid arthritis, bronchial asthma) may be complicated by peptic ulcer, hypertension, diabetes, weight gain, cataract and osteoporosis (Fig. 1.18).
   - Immunisation taken so far for hepatitis B, tetanus, pneumococcal or influenza vaccine; any H/o self medication?

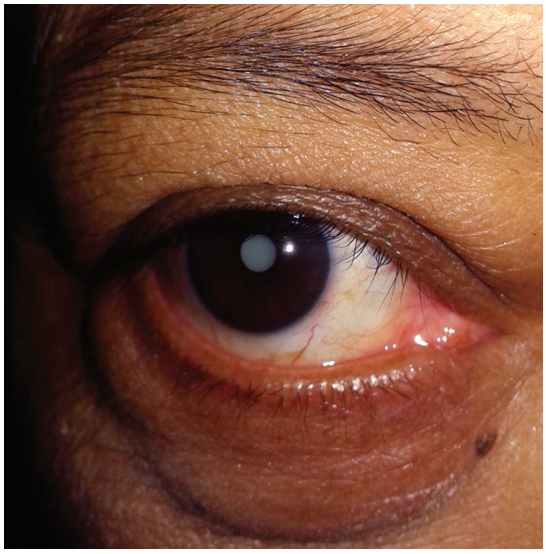

Fig. 1.18: Cataract in right eye after prolonged corticosteroid therapy in bronchial asthma

7. ***Psychiatric history:*** Try to record the 'mood' of the patient i.e., anxiety, depression, phobia, obsession, euphoria or irritability should be noted. Irritable bowel syndrome (IBS), peptic ulcer, bronchial asthma are examples of common psychosomatic disorders. Examples of 'functional disorders' (non-organic diseases, and many a time stress-induced) are chronic fatigue syndrome, irritable bowel syndrome (IBS), fibromyalgia and conversion disorder (previous 'hysteria').
8. ***Menstrual and obstetric history in women:*** Try to include menarche, duration of menstruation, quantity of blood loss (assess indirectly by number of pads used), any dysmenorrhoea or amenorrhoea, date of last menstrual period (LMP), menopause (age at menopause, any post-menopausal bleeding or hormone replacement therapy), and obstetric history (number of pregnancy, outcome i.e., abortion or live birth, complications like toxaemia of pregnancy, mode of delivery i.e., normal or Caesarean section, and last child birth).