Chapter

1 Introduction to the Human Body

The human body is a very complex multicellar organism in which the maintenance of life cycle depends upon a most number of physiological and biochemical activities. The total activities enable the human being to live in this world and utilise his environment, and to maintain the generation by reproducing.

ANATOMY

Anatomy is the study of the structure and architecture of the body and of the relationship of its surrounding structures.

Regional anatomy It is a geographical or topographical study made on each regions, e.g. the head and neck, the chest, the arm and forearm. It consists a number of structures to all regions such as skin, fascia, muscle, bones, nerves and vessels.

Systematic anatomy The body is made up of many tissues and organs, each having its own particular function to perform. The cell is the smallest unit of the body. The cells are adapted to perform the special function of the organ systems to deal with different work of the body. So these structures are studied **under** this heading, e.g.:

1. Osteology is the study of the bones.
2. Arthrology is the study of the joints.
3. Myology is the study of muscles.
4. Splanchnology is the study of the organs of viscera.
5. Neurology is the study of the brain and nerves.
6. Kinesiology is the study of the movements in the joints.
7. Embryology is the study of the developing embryo.
8. Cytology is the study of cells.
9. Histology is the study of cells under magnification, e.g. under microscope.

AIM OF ANATOMY

As a scientific discipline it is to study the form of body but to gain a profound understanding of the biological principles and processes of multiplication and differentiation of cells.

Macroscopic anatomy: Certain structures are studied under naked eye examination called *macroscopic anatomy*.

Surface anatomyis to study of organs or viscera in relation to the skin, and palpable bony points underneath the skin, e.g. to feel the radial pulse against radius bone, palpate apex beat in the left intercostal space on left side of the chest. The study of surface anatomy is very important to feel, or auscultate the viscera and diagnose the disease of human body.

Embryology is the study of the development of embryo in the uterus of mother from fertilization to delivery of the baby.

Physiology is the study of the functions of normal human body. It is closely linked with the study of all living things in the subject of biology.

Biochemistry deals with biochemical changes in haemodynamics and activities of cells and to investigating the complex chemistry of life.

Biophysicsis the study of physical reaction and movements of different types of cells in the body.

ANATOMICAL NOMENCLATURE

Words derived from Latin and Greek have also advantage of being suitable for international usage and to ensure uniform usage, made since 1895 when the Basle Nomina Anatomica was introduced.

The human body is studied from erect position with arms by the sides and the palms of the hands facing forwards, the head erect and eyes looking straight, this is described as the anatomical position.

PLANES

1. Median plane is the imaginary line passes through the centre of the body.
2. Lateral plane is the imaginary line passes through the body just away or either side of median plane.

The terms superficial and deep are used to denote relative distance from the surface of the body. Superior and inferior denote positions relatively high or low.

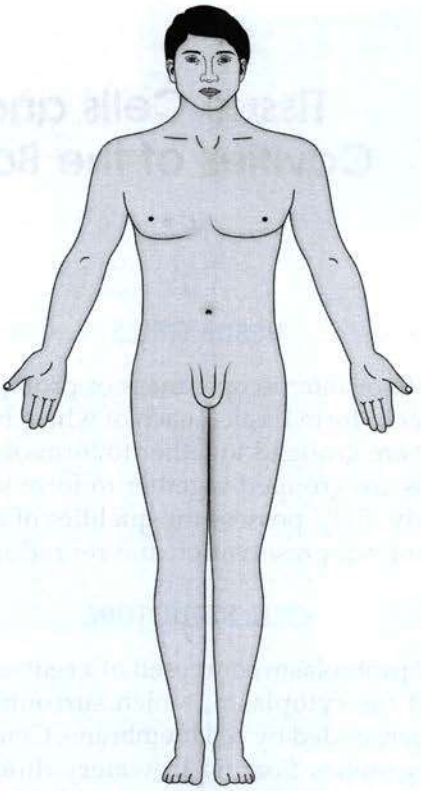

Fig. 1.1: The anatomical position

The term anterior means front side or ventral, the term posterior or dorsal means back side in describing the hand, the terms palmar and dorsal are used instead of anterior or posterior and in describing the foot, the terms plantar and dorsal are similarly employed.