

SYLLABUS OF PART – I

SUBJECT - ORAL AND MAXILLOFACIAL SURGERY

Applied Basic Sciences: Applied Anatomy, Physiology, Biochemistry, General and oral Pathology and Microbiology and Pharmacology

Applied Anatomy:

- Surgical anatomy of the scalp, temple and face
- Anatomy of the triangles of neck and deep structures of the neck
- Cranial and facial bones and its surrounding soft tissues with its applied aspects in maxillofacial injuries.
- Muscles of head and neck
- Arterial supply, venous drainage and lymphatics of head and neck
- Congenital abnormalities of head and neck
- Surgical anatomy of the cranial nerves
- Anatomy of the tongue and its applied aspects
- Surgical anatomy of the temporal and infra-temporal regions
- Anatomy and its applied aspects of salivary glands, pharynx, thyroid and parathyroid gland, larynx, trachea oesophagus
- Tooth eruption, morphology, and occlusion
- Surgical anatomy of the nose.
- The structure and function of the brain including surgical anatomy of intra cranial venous sinuses.
- Autonomous nervous system of head and neck
- Functional anatomy of mastication, deglutition, speech, respiration and circulation
- Development of face, Paranasal sinuses and associated structures and their anomalies
- TMJ: surgical anatomy and function

Physiology:

Nervous System

- Physiology of nerve conduction, pain pathway, sympathetic and parasympathetic nervous system, hypothalamus and mechanism of controlling body temperature

Blood

- Composition
- Hemostasis, various blood dyscrasia and management of patients with the same
- Hemorrhage and its control
- Capillary and lymphatic circulation
- Blood grouping, transfusing procedures.

Digestive System

- Saliva – composition and functions of saliva
- Mastication deglutition, digestion, assimilation
- Urine formation, normal and abnormal constituents

Respiration

- Control of ventilation, anoxia, asphyxia, artificial respiration
- Hypoxia – types and management

Cardio Vascular System

- Cardiac cycle
- Shock
- Heart sounds
- Blood pressure
- Hypertension:

Endocrinology

- General endocrinal activity and disorder relating to thyroid gland,
- Parathyroid gland, adrenal gland, pituitary gland, pancreas and gonads:
- Metabolism of calcium

Nutrition

- General principles of a balanced diet, effect of dietary deficiency, protein energy malnutrition, Kwashiorkor, Marasmus.
- Fluid and Electrolytic balance in maintaining hemostasis and significance in minor and major surgical procedures.

Biochemistry:

General principles governing the various biological activities of the body, such as osmotic pressure, electrolytes, dissociation, oxidation, reduction etc

General composition, of the body

Intermediary metabolism

Carbohydrates, proteins

Carbohydrates, proteins, lipids, and their metabolism nucleoproteins, nucleic, acid and nucleotides and their metabolism

Enzymes, vitamins and minerals

Hormones

Body and other fluids

Metabolism of inorganic elements

Detoxification in the body

Antimetabolites

Pathology:

Inflammation

- Repair and regeneration, necrosis and gangrene
- Role of component system in acute inflammation,
- Role of arachidonic acid its metabolites in acute inflammation,
- Growth factors in acute inflammation
- Role of molecular events in cell growth and intercellular signaling cell surface receptors
- Role of NSAIDs in radiation injury and its manifestation:
- Cellular changes in radiation injury and its manifestation:

Hemostasis

- Role of endothelium in thrombogenesis,
- Arterial and venous thrombi,
- Disseminated Intravascular coagulation

Shock:

- Pathogenesis of hemorrhagic, neurogenic, septic, cardiogenic shock
- Circulatory disturbances, ischemia hyperemia , venous congestion, edema, infarction

Chromosomal Abnormalities:

- Marfans Syndrome, Ehler's Danlos Syndrome, Fragile X-Syndrome

Hypersensitivity:

- Anaphylaxis, type 2 hypersensitivity, type 3 hyper sensitivity and cell mediated reaction and its clinical importance, systemic lupus erythematosus.

- Infection and infective granulomas

Neoplasia:

- Classification of tumors.
- Carcinogenesis and carcinogen – chemical, viral and microbial
- Grading and staging of cancers, tumor Angiogenesis, Paraneoplastic syndrome, spread of tumors
- Characteristics of benign and malignant tumors

Others:

- Sex linked agammaglobulinemia.
- AIDS
- Management of immun deficiency patients, requiring surgical procedures
- De George Syndrome
- Ghons complex, post primary pulmonary tuberculosis – pathology and pathogenesis.

Oral Pathology:

- Developmental disturbances of oral and Para oral structures
- Regressive changes of teeth
- Bacterial, viral and mycotic infection of oral cavity
- Dental caries, diseases of pulp and periapical tissues
- Physical and chemical injuries of the oral cavity
- Oral manifestations of metabolic and endocrinal disturbances
- Diseases of jawbones and TMJ
- Diseases of blood forming organs in relation to oral cavity
- Cysts of the oral cavity
- Salivary gland diseases
- Role of laboratory investigations in oral surgery

Microbiology:

- Immunity
- Knowledge of organisms commonly associated with disease of oral cavity.
- Morphology cultural characteristics of strepto, staphylo, pneumo, gono, meningo, clostridium group of organism, spirochetes, organisms of TB, leprosy, diphtheria, actinomycosis and moniliiasis
- Hepatitis B and its prophylaxis
- Culture and sensitivity test

- Laboratory determinations
- Blood groups, blood matching, RBC and WBC count
- Bleeding and clotting time etc, smears and cultures,
- Urine analysis and cultures.

Applied Pharmacology and Therapeutics:

- Definition of terminologies used
- Dosage and mode of administration of drugs.
- Action and fate of drugs in the body
- Drug addiction, tolerance and hypersensitivity reactions.
- Drugs acting on the CNS
- General and local anesthetics, hypnotics, analeptics, and tranquilizers.
- Chemo therapeutics and antibiotic drugs.
- Analgesics and antipyretics
- Antitubercular and antisyphilitic drugs.
- Antiseptics, Sialogogues and antisialogogues
- Haematinics
- Antidiabetics
- Vitamins A,B-complex C,D,E,K