

PERIODONTOLOGY SYLLABUS:

PART-I:

APPLIED BASIC SCIENCES

APPLIED ANATOMY:

1. Development of the Periodontium
2. Micro and Macrostructural anatomy and biology of the periodontal tissues
3. Age changes in the periodontal tissues
4. Anatomy of the Periodontium
 - Macroscopic and microscopic anatomy
 - Blood supply of the Periodontium
 - Lymphatic system of the Periodontium
 - Nerves of the Periodontium
5. Temporomandibular joint, Maxillae and Mandible
6. Tongue, oropharynx
7. Muscles of mastication / Face
8. Blood Supply and Nerve Supply of Head & Neck and Lymphatics.
9. Spaces of Head & Neck

PHYSIOLOGY:

1. Blood
2. Respiratory system – knowledge of the respiratory diseases which are a cause of periodontal diseases (periodontal Medicine)
3. Cardiovascular system
 - a. Blood pressure
 - b. Normal ECG
 - c. Shock
4. Endocrinology – hormonal influences on Periodontium
5. Gastrointestinal system

- a. Salivary secretion—composition, function & regulation
 - b. Reproductive physiology
 - c. Hormones—Actions and regulations, role in periodontal disease
 - d. Family planning methods
6. Nervous system
- a. Pain pathways
 - b. Taste—Taste buds, primary taste sensation & pathways for sensation
7. Hemostasis

BIOCHEMISTRY:

1. Basics of carbohydrates, lipids, proteins, vitamins, enzymes and minerals
2. Diet and nutrition and periodontium
3. Biochemical tests and their significance
4. Calcium and phosphorus

PATHOLOGY:

1. Cell structure and metabolism
2. Inflammation and repair, necrosis and degeneration
3. Immunity and hypersensitivity
4. Circulatory disturbances—
edema, hemorrhage, shock, thrombosis, embolism, infarction and hypertension
5. Disturbances of nutrition
6. Diabetes mellitus
7. Cellular growth and differentiation, regulation
8. Lab investigations
9. Blood

MICROBIOLOGY:

1. General bacteriology

- a. Identification of bacteria
- b. Culture media and methods
- c. Sterilization and disinfection
- 2. Immunology and Infection
- 3. Systemic bacteriology with special emphasis on oral microbiology – staphylococci, genus actinomyces and other filamentous bacteria and actinobacillus actinomycetum comitans
- 4. Virology
 - a. General properties of viruses
 - b. Herpes, Hepatitis, virus, HIV virus
- 5. Mycology
 - a. Candidiasis
- 6. Applied microbiology
- 7. Diagnostic microbiology and immunology, hospital infections and management

PHARMACOLOGY:

- 1. General pharmacology
 - a. Definitions – Pharmacokinetics with clinical applications, routes of administration including local drug delivery in Periodontics
 - b. Adverse drug reactions and drug interactions
- 2. Detailed pharmacology of
 - a. Analgesics – opiod and non opiod
 - b. Local anesthetics
 - c. Haematinics and coagulants, Anticoagulants
 - d. VitD and Calcium preparations
 - e. Antidiabetic drugs
 - f. Steroids

g.
Antibiotics

h.
Antihypertensives

i. Immunosuppressive drugs and their effects on oral tissues
j. Antiepileptic drugs

3. Brief pharmacology, dental use and adverse effects of a. General anesthetics

b.
Antipsychotics

c.
Antidepressants
d. Anxiolytic drugs
e.
Sedatives

f.
Antiepileptics

g.
Antihypertensives
h.
Antianginal drugs

i.
Diuretics

- j. Hormones
 - k. Pre-anesthetic medications
4. Drugs used in Bronchial asthma, cough
 5. Drug therapy of a. Emergencies
 - b. Seizures
 - c. Anaphylaxis
 - d. Bleeding
 - e. Shock
 - f. Diabetic ketoacidosis
 - g. Acute Addisonian crisis
 6. Dental Pharmacology
 - a. Antiseptics
 - b. Astringents
 - c. Sialogogues
 - d. Disclosing agents
 - e. Antiplatelet agents
 7. Fluoride pharmacology

BIOSTATISTICS:

1. Introduction, definition and branches of biostatistics
2. Collection of data, sampling, types, bias and errors
3. Compiling data-graphs and charts
4. Measures of central tendency (mean, median and mode), standard deviation and variability
5. Tests of significance (chi square test, t-test and z-test)

Null hypothesis

PART II

PAPER 1

ETIOPATHOGENESIS:

1. Classification of periodontal diseases and conditions
2. Epidemiology of gingival and periodontal diseases
3. Defense mechanisms of gingiva
4. Periodontal microbiology
5. Basic concepts of inflammation and immunity
6. Microbial interactions with the host in periodontal diseases
7. Pathogenesis of plaque-associated periodontal diseases
8. Dental calculus
9. Role of iatrogenic and other local factors
10. Genetic factors associated with periodontal diseases
11. Influence of systemic diseases and disorders of the periodontium
12. Role of environmental factors in the etiology of periodontal disease
13. Stress and periodontal diseases
14. Occlusion and periodontal diseases
15. Smoking and tobacco in the etiology of periodontal diseases
16. AIDS and periodontium
17. Periodontal medicine
18. Dentinal hypersensitivity

PAPER-II

CLINICAL AND THERAPEUTIC PERIODONTOLOGY AND ORAL IMPLANTOLOGY

Please note:

Clinical periodontology includes gingival diseases, periodontal diseases, periodontal instrumentation, diagnosis, prognosis and treatment of periodontal diseases.

(i) GINGIVAL DISEASES

1. Gingival inflammation
2. Clinical features of gingivitis
3. Gingival enlargement
4. Acute gingival infections
5. Desquamative gingivitis and oral mucous membrane diseases
6. Gingival diseases in the childhood

(ii) PERIODONTAL DISEASES

1. Periodontal pocket
2. Bone loss and patterns of bone destruction
3. Periodontal response to external forces
4. Masticatory system disorders
5. Chronic periodontitis
6. Aggressive periodontitis
7. Necrotising ulcerative periodontitis
8. Interdisciplinary approaches
 - Orthodontic
 - Endodontic

(iii) TREATMENT OF PERIODONTAL DISEASES

A. History, examination, diagnosis, prognosis and treatment planning

1. Clinical diagnosis
2. Radiographic and other aids in the diagnosis of periodontal diseases
3. Advanced diagnostic techniques
4. Risk assessment
5. Determination of prognosis
6. Treatment plan
7. Rationale for periodontal treatment
8. General principles of anti-infective therapy with special emphasis on infection control in periodontal practice
9. Halitosis and its treatment
10. Bruxism and its treatment

B. Periodontal instrumentation

1. Periodontal Instruments
2. Principles of periodontal instrumentation

C. Periodontal therapy

1. Preparation of tooth surface
2. Plaque control
3. Anti microbial and other drugs used in periodontal therapy and wasting diseases of teeth
4. Periodontal management of HIV infected patients
5. Occlusal evaluation and therapy in the management of periodontal diseases
6. Role of orthodontics as an adjunct to periodontal therapy
7. Special emphasis on precautions and treatment for medically compromised patients
8. Periodontal splints

9. Management of
dentinal hypersensitivity

D. Periodontal surgical phase—special emphasis on drug prescription

1. General principles of periodontal
surgery

2. Surgical
anatomy of periodontium and related structures

3. Gingival
curettage

4. Gingivectomy
technique

5. Treatment of gingival
enlargements

6. Periodontal
flap

7. Osseous surgery (resective
and regenerative)

8. Furcation;
Problem and its management

9. The periodontic –
endodontic continuum

10. Periodontic plastic and
esthetic surgery

11. Recent advances in surgical
techniques

E. Future directions and controversial questions in periodontal therapy

1. Future directions for infection
control

2. Research directions in regenerative
therapy

3. Future directions in anti-inflammatory therapy

4. Future directions in measurement of periodontal diseases

F. Periodontal maintenance phase

1. Supportive periodontal treatment

2. Results of periodontal treatment

(iv) ORAL IMPLANTOLOGY

1. Introduction and historical review

2. Biological, clinical and surgical aspects of dental implants

3. Diagnosis and treatment planning

4. Implant surgery

5. Prosthetic aspects of dental implants

6. Diagnosis and treatment of periimplant complications

7. Special emphasis on plaque control measures in implant patients

8. Maintenance phase

(v) MANAGEMENT OF MEDICAL EMERGENCIES IN PERIODONTAL PRACTICE

Periodontology treatments should be practiced by various treatment plans and more number of patients to establish skill for diagnosis and treatment and after care with bio-

mechanical, biological, bio-esthetics, bio-phonetics and all treatments should be carried out in more number for developing clinical skill.