

**PACIFIC DENTAL COLLEGE AND HOSPITAL, DEBARI, UDAIPUR**

**BDS CURRICULUM**

**ORAL PATHOLOGY & ORAL MICROBIOLOGY**

**OBJECTIVES:**

At the end of Oral Pathology & Oral Microbiology course, the student should be able to comprehend -

1. The different types of pathological processes, that involve the oral cavity.
2. The manifestations of common diseases, their diagnosis & correlation with clinical pathological processes.
3. An understanding of the oral manifestations of systemic diseases should help in correlating with the systemic physical signs & laboratory findings.
4. The student should understand the underlying biological principles governing treatment of oral diseases.
5. The principles of certain basic aspects of Forensic Odontology.

**SKILLS:**

1. Microscopic study of common lesions affecting oral tissues through microscopic slides & projection slides.

2. Study of the disease process by surgical specimens.
3. Study of teeth anomalies/polymorphisms through tooth specimens & plaster casts.
4. Microscopic study of plaque pathogens.
5. Study of haematological preparations (blood films) of anaemias & leukemias.
6. Basic exercises in Forensic Odontology such as histological methods of age estimation and appearance of teeth in injuries.

## 1. INTRODUCTION:

A bird's eye view of the different pathological processes involving the oral cavity & oral cavity

involvement in systemic diseases to be brought out. Interrelationship between General Medicine &

General Surgery & Oral pathology to be emphasized.

## 2. Developmental disturbances of teeth, jaws and soft tissues of oral & paraoral region :

Introduction to developmental disturbances - Hereditary, Familial mutation, Hormonal etc. causes to be highlighted.

Developmental disturbances of teeth - Etiopathogenesis, clinical features, radiological features &

histopathological features as appropriate :-

The size, shape, number, structure & eruption of teeth & clinical significance of the anomalies to be

emphasized.

Forensic Odontology.

Developmental disturbances of jaws - size & shape of the jaws.

Developmental disturbances of oral & paraoral soft tissues - lip & palate - clefts, tongue, gingiva,

mouth, salivary glands & face.

### 3. Dental Caries :

Etiopathogenesis, microbiology, clinical features, diagnosis, histopathology, immunology, prevention of dental caries & its sequelae.

### 4. Pulp & Periapical Pathology & Osteomyelitis.

Etiopathogenesis & interrelationship, clinical features, microbiology, histopathology & radiological

features (as appropriate) of pulp & periapical lesions & osteomyelitis.

Sequelae of periapical abscess - summary of space infections, systemic complications & significance.

### 5. Periodontal Diseases :

Etiopathogenesis, microbiology, clinical features, histopathology & radiological features (as appropriate) of gingivitis, gingival enlargements & periodontitis. Basic immunological mechanisms of

periodontal disease to be highlighted.

### 6. Microbial infections of oral soft tissues :

Microbiology, defence mechanisms including immunological aspects, oral manifestations, histopathology and laboratory diagnosis of common bacterial, viral & fungal infections namely :-

Bacterial : Tuberculosis, Syphilis, ANUG & its complications - Cancrum Oris.

Viral : Herpes Simplex, Varicella zoster, Measles, Mumps & HIV infection.

Fungal : Candidal infection. Aphthous Ulcers.

7. Common non- inflammatory diseases involving the jaws :

Etiopathogenesis, clinical features, radiological & laboratory values in diagnosis of :

Fibrous dysplasia, Cherubism, Osteogenesis Imperfecta, Paget's disease, Cleidocranial dysplasia,

Rickets, Achondroplasia, Marfan's syndrome & Down's syndrome.

8. Diseases of TM Joint :

Ankylosis, summary of different types of arthritis & other developmental malformations, traumatic

injuries & myofascial pain dysfunction syndrome.

9. Cysts of the Oral & Paraoral region :

Classification, etiopathogenesis, clinical features, histopathology, laboratory & radiological features

(as appropriate) of Odontogenic cysts, Non-Odontogenic cysts, Pseudocysts of jaws & soft tissue cysts of oral & paraoral region.

10. Tumours of the Oral Cavity :

Classification of Odontogenic, Non-Odontogenic & Salivary Gland Tumours.

Etiopathogenesis, clinical features, histopathology, radiological features & laboratory diagnosis (as appropriate) of the following common tumours :-

a) Odontogenic - all lesions.

b) Non-odontogenic

- Benign Epithelial - Papilloma, Keratoacanthoma & Naevi.

- Benign Mesenchymal - Fibroma, Aggressive fibrous lesions, Lipoma,

Haemangioma, Lymphangioma, Neurofibroma,

Schwannoma, Chondroma, Osteoma & Tori.

- Malignant Epithelial - Basal Cell Carcinoma, Verrucous Carcinoma,

Squamous Cell carcinoma &

Malignant Melanoma.

- Malignant Mesenchymal - Fibrosarcoma, Osteosarcoma, Giant cell

tumour, Chondrosarcoma, Angiosarcoma,

Kaposi's sarcoma, Lymphomas, Ewing's sarcoma &

Other Reticuloendothelial tumours.

c) Salivary Gland

- Benign Epithelial neoplasms - Pleomorphic Adenoma, Warthin's tumour,

& Oncocytoma.

- Malignant Epithelial neoplasms - Adenoid Cystic Carcinoma,

Mucoepidermoid Carcinoma,

Acinic Cell Carcinoma & Adenocarcinomas.

d) Tumours of Disputed Origin - Congenital Epulis & Granular Cell Myoblastoma.

e) Metastatic tumours - Tumors metastasizing to & from oral cavity & the routes of metastasis.

#### 11. Traumatic, Reactive & Regressive lesions of Oral Cavity :

Pyogenic & Giant cell granuloma, exostoses, Fibrous Hyperplasia, Traumatic Ulcer & Traumatic

Neuroma.

Attrition, Abrasion, Erosion, Bruxism, Hypercementosis, Dentinal changes, Pulp calcifications &

Resorption of teeth.

Radiation effects of oral cavity, summary of Physical & Chemical injuries including allergic reactions

of the oral cavity.

Healing of Oral wounds & complications - Dry socket.

#### 12. Non neoplastic Salivary Gland Diseases :

Sialolithiasis, Sialosis, Sialadenitis, Xerostomia & Ptyalism.

#### 13. Systemic Diseases involving Oral cavity :

Brief review & oral manifestations, diagnosis & significance of common Blood, Nutritional, Hormonal & Metabolic diseases of Oral cavity.

#### 14. Mucocutaneous Lesions :

Etiopathogenesis, clinical features & histopathology of the following common lesions.

Lichen Planus, Lupus Erythematosus, Pemphigus & Pemphigoid lesions, Erythema Multiforme,

Psoriasis, Scleroderma, Ectodermal Dysplasia, Epidermolysis bullosa & White sponge nevus..

#### 15. Diseases of the Nerves :

Facial neuralgias - Trigeminal & Glossopharyngeal. VII nerve paralysis, Causalgia.

Psychogenic facial pain & Burning mouth syndrome.

#### 16. Pigmentation of Oral & Paraoral region & Discolouration of teeth :

causes & clinical manifestations.

#### 17. Diseases of Maxillary Sinus :

Traumatic injuries to sinus, Sinusitis, Cysts & Tumours involving antrum.

18. a) ORAL PRECANCER – CANCER; Epidemiology, aetiology, clinical and histopathological features,

TNM classification. Recent advances in diagnosis, management and prevention.

b) Biopsy : Types of biopsy, value of biopsy, cytology, histo chemistry & frozen sections in diagnosis of oral diseases.

#### 19. Principles of Basic Forensic Odontology (Pre-clinical Forensic Odontology):

Introduction, definition, aims & scope.

Sex and ethnic (racial) differences in tooth morphology and histological age estimation

Determination of sex & blood groups from buccal mucosa / saliva.

Dental DNA methods

Bite marks, rugae patterns & lip prints.

Dental importance of poisons and corrosives.

Overview of forensic medicine and toxicology

#### RECOMMENDED BOOKS

1. A Text Book of Oral Pathology - Shafer, Hine & Levy.
2. Oral Pathology - Clinical Pathologic correlations - Regezi & Sciubba.
3. Oral Pathology - Soames & Southam.
4. Oral Pathology in the Tropics - Prabhu, Wilson, Johnson & Daft