Contents

SECTION 1: INTRODUCTION

1. Embryology and Development of Head and Face **3**

- Early Embryology *3*
- Dentition *27*

2. Anatomy of Head and Face **34**

- Descriptive Anatomic Terms *34*
- Cellular Organization *34*
- Osteology of Head and Neck *36*
- Skull *36*
- Maxilla *49*
- Nasal Cavity *51*
- Paranasal Sinuses *52*
- Palate *55*
- Pharynx *57*
- Larynx *58*
- Mandible *59*
- Temporomandibular Joint *60*
- Hyoid Bone *63*
- Cervical Vertebrae *63*
- Surface Anatomy of Face (Superficial Face) *64*
- Muscles of Mastication *68*
- Neck *69*
- Submandibular Region and Floor of the Mouth *70*
- Tongue Muscles *71*
- Major Salivary Glands *72*
- Cranial Nerves *74*
- Vascular System of the Head and Neck *82*
- Lymphatics of Head and Neck *84*

SECTION 2: GENERAL DIAGNOSTICS, INVESTIGATIONS AND THERAPEUTIC

3. Investigation Protocols **93**

- Fundamentals of Ordering a Test *93*
- Approaches to Interpret Tests *94*
- Parameters to Assess an Investigation *94*
- Laboratory Tests *94*
- Interpretation of Common Pathologies *98*
- Radiographic Investigations *105*

4. Therapeutics **108**

- General Principles of Therapy *108*
- Drug Pharmacokinetics and Pharmacodynamics *108*
- Route of Administration and Drug Delivery *108*
- Analgesics *109*
- General Anesthetics *113*
- Local Anesthetics *114*
- Muscle Relaxant *115*
- Sedative-Hypnotics *116*
- Anticonvulsant/Antiepileptic Drugs *116*
- Antidepressant Drugs *117*
- Antianxiety Drugs *118*
- Antimicrobial Drugs *118*
- Phytotherapy for Oral Mucosal Lesions *154*
- Equipment-assisted Therapeutics *154*

5. Clinical Assessment and Process of Diagnosis **169**

- Diagnosis *169*
- Statistics *174*
- Symptom *174*
- Sign *175*
- Components of History Format *175*
- Summarize *178*
- Signposting *178*
- Classification of Diseases *216*

SECTION 3: PATHOLOGIES AFFECTING THE ORAL MUCOSA

6. Periodontal Diseases **223**

- Classification of Periodontal Diseases *223*
- Genetic Disorders *224*
- Acquired Disorders *230*
- Advanced Clinical Diagnosis of Periodontal Disease *244*

7. Pigmented Lesions **246**

- Pigmented Lesions *246*
- Classification of Pigmented Lesions *247*
- Genetic Disorders *249*
- Acquired Disorders *253*
- Colored Lesions of Vascular Origin (Red/Purple/Blue) *257*
- Exogenous Pigmentation *258*
- Food, Habits, Heavy Metal and Drug-induced Hyperpigmentation *260*
- Superficial Transient Discoloration *261*
- Pigmentation due to Systemic Diseases *261*
- Depigmentation *264*

8. Infectious and Inflammatory Lesions **266**

- Oral Manifestations of Generalized Inflammation of the Oral Cavity *267*
- Bacterial Infections *271*

- Viral Infections *278*
- Fungal Infections *290*
- Protozoal Infestations *294*
- Parasitic Infection *294*

9. Vesiculobullous and Ulcerative Lesions 298

- Vesiculobullous Lesions *299*
- Ulcerative Lesions *316*

10. Potentially Malignant Disorders; Red and White Lesions 333

- Potentially Malignant Disorders *333*
- Classification of Oral Potentially Malignant Disorders *334*
- Red Lesions *349*
- White Lesions *354*

11. Soft Tissue Enlargements 361

- Genetic Disorders *363*
- Developmental Disorders *369*
- Inflammatory Lesions *371*
- Traumatic Lesions *374*
- Cystic Lesions *377*
- Benign Neoplasms *382*

12. Oral Cancer 390

- Historical Brief Review of Oral Cancer in India *390*
- Definition *391*
- Incidence *391*
- Age Distribution *392*
- Gender Differences *392*
- Religion *392*
- Etiopathogenesis *392*
- Epigenetic Factors *392*
- Carcinogenesis *396*
- Oral Cancer Classification *397*
- Staging of Oral Cancer *397*
- Biomarkers *398*
- Clinical Features *399*
- Lymph Nodes *407*
- Other Oral Cancer Types *408*
- Malignant Neoplasms of Bone and Connective Tissue *410*
- Examination of the Oral Cavity *415*
- Diagnostic Delay *421*
- Management *421*
- Prognosis Survival Rate *424*
- Toxicity *425*
- Oral and Dental Management *427*
- Psychological Aspects of Patient Care *428*
- Tobacco Cessation *429*

13. Diseases of Lip 434

- Genetic/Congenital Disorders *434*
- Acquired Disorders *440*

14. Diseases of Tongue 448

- Genetic/Congenital Disorders of Tongue Diseases *449*
- Acquired Lesions *456*
- Taste Disorders *469*

SECTION 4: ORAL MAXILLOFACIAL DISTURBANCES

15. Diseases of Teeth 477

- Types of Teeth, Structures, Location, and Functions *477*
- Types of Teeth and their Functions *478*
- Diseases of Teeth *479*
- Dental Anomalies *491*
- Dental Pulp *514*
- Acquired Anomalies *515*

16. Bone related Lesions of the Jaws 522

- Classification *522*
- Cysts of the Jaws *522*
- Odontogenic Tumors *531*
- Reactive Bone Lesions *541*
- Fibro-osseous Lesions *555*
- Giant Cell Lesions *557*
- Bone Tumors *562*
- Manifestation of Systemic Diseases in the Jaws *569*
- Craniofacial Anomalies *581*

17. Temporomandibular Joint Disorders 591

- Classification *591*
- General Clinical Considerations *592*
- Degenerative Joint Changes *595*
- Inflammatory (Diffuse Collagen Diseases) *597*
- Infection of TMJ *601*
- Developmental *603*
- Trauma *607*
- Metabolic Disorders *622*
- Biochemical Abnormalities *623*
- Neoplasia *623*
- Neuropathic Disorders *628*
- Drug-induced Disorders *629*
- Extracapsular Disorders *629*

18. Salivary Gland Disorders 632

- Saliva *633*
- Salivary Gland Dysfunction *635*
- Classification of Salivary Gland Disorders *637*
- Developmental Disorders *637*
- Obstructive Disorders *639*
- Cysts *640*
- Asymptomatic Enlargements *641*
- Infections *642*
- Autoimmune Disorders *646*
- Neurological Disorders *648*
- Vascular Disorders *648*
- Salivary Gland Tumors *648*
- Others *654*
- Diagnostics for Salivary Gland Disorders *655*

19. Orofacial Pain 657

- Definitions of Pain *657*
- Classification of Pain Disorders *657*
- Orofacial Pain *661*
- Evaluation of Orofacial Pain *662*

20. Systemic Disorders and Oral Health **698**
- Nutritional and Metabolic Disorders *698*
- Blood and Hematologic Disorders *703*
- Endocrinal Disorders *707*
- Autoimmune Disorders *710*
- Genetic Disorders *718*

SECTION 5: RECENT ADVANCES

21. Management of Medically Compromised Patients in Dental Practice **733**
- Patient Assessment Considerations *733*
- Form 1: Patient Assessment Form *734*
- Cardiovascular Disease *734*
- Hematologic Disorders *739*
- Neurologic Disorders *740*
- Gastrointestinal Diseases *741*
- Respiratory Tract Disease *742*
- Musculoskeletal Disease *743*
- Endocrine Disease *743*
- Genitourinary Tract Disease *744*
- Autoimmune Disease *744*
- Other Conditions and Factors *745*
- Risk Assessment *746*
- Treatment Modifications *746*
- The Geriatric Patient *746*
- Pediatric Care *748*

22. Breath Analysis and Halitosis **755**
- Diseases and Disorders Indicated by Important Biomarkers *757*
- Breath Analysis Benefits and Drawbacks *759*
- Halitosis (Bad Breath, Fetid Halitus, Mouth Odor, Bad Breath, Bad Mouth Odor, Malodor) *761*

23. Forensic Stomatology **771**
- Identification of Human Remains *771*
- Child Abuse *772*
- Cheiloscopy *775*
- Palatoscopy/Rugoscopy *784*
- Odontometry *789*
- Bite Mark Analysis *796*
- Tongue *801*
- Oral Microbiome (Mouth Bacteria) *802*
- Saliva *803*

24. Clinical Research **806**
- Research *806*
- What is a Research Design? *807*
- Health Research *810*
- Research Topics in Oral Medicine and Radiology *812*
- Biostatistics *812*
- Writing a Research Protocol *816*

25. Clinical Scenarios of Oral Facial Pathologies **820**

Index *839*