Contents

Preface to the Third Edition	vii
Preface to the First Edition	ix
Introduction and Basic Radiation Physics	1
Electromagnetic spectrum 3 Construction and working of X-ray machine 5 Factors affecting the radiographs 14	
2. Radiobiology	37
Radiation effects and classification 38 Radiation protection 51	
3. Ideal Radiograph and Radiographic Techniques	58
Rules of projection geometry 58 Periapical radiographs 66 Faults/blemishes artifacts in radiographs 73 Occlusal Radiography 81 Extraoral radiography 86	
4. Anatomical Landmarks	114
Anatomic landmarks of the maxilla 118 Anatomiical landmarks of the mandible 126	
5. Digital Imaging	134
Digital image detectors 135 Digital subtraction radiography 139	
6. Principles of Radiographic Interpretation	140
Image analysis 141 Commandments of radiographic interpretation 147	
7. Dental Caries and Periapical Pathology	149
Limitations of radiography in diagnosing dental caries Radiographic appearance of caries 151 Differential diagnosis of dental caries 154 Periapical lesions 157	149

XII	Concise Oral Radiology	
_	Particular Indiana and	1/5
8.	Periodontal Diseases	165
	Limitations of radiography 165 Radiographic findings in periodontal disease 167	
9.	Osteomyelitis	175
	Etiology 175 Pathogenesis 176 Radiographic features 177 Garre's osteomyelitis 183	
10.	Cysts of the Jaws	187
	Characteristic features of cyst 188 Radicular cyst 188 Dentigerous cyst 192 Odontogenic keratocyst 196	
11.	Odontomes and Benign Tumors	213
	Classification of odontomes 213 Differences between benign and malignant tumors 219 WHO classification of odontogenic tumors 221	
12.	Malignant Tumors	254
	Modes of spread of malignancies 255 The TNM staging 257 Squamous cell carcinoma 260 Osteosarcoma 268	
13.	Developmental Disorders Affecting the Teeth	277
	Amelogenesis imperfecta 284 Dentinogenesis imperfecta 286 Dentine dysplasia 287	
14.	Salivary Gland Diseases	290
	Classification of salivary gland diseases 291 Imaging modalities for salivary gland diseases 292 Sialographic appearance in various diseases 295	
15.	TMJ Disorders	313
	Classification of TM joint disorders 313 Ankylosis 326 Internal disc derangement 330 Myofacial pain dysfunction syndrome 334	

16. Diseases of Maxillary Sinus	339
Maxillary sinusitis 342 Oroantral fistula 345 Extrinsic cysts and tumours 347 Squamous cell carcinoma of the sinus 349	
17. Fibro-Osseous and other Bone Lesions	353
Fibrous dysplasia 353 Cherubism 358 Florid osseous dysplasia 359 Ossifying fibroma 361 Paget's disease 361	
1 3.901 0 3.100 3.00	
18. Advanced Imaging Modalities for Maxillofacial Region	366
•	366
18. Advanced Imaging Modalities for Maxillofacial Region Xeroradiography 366 Ultrasonography 366 CT scans 368 Cone beam computed tomography 369 Magnetic resonance imaging 373	366
18. Advanced Imaging Modalities for Maxillofacial Region Xeroradiography 366 Ultrasonography 366 CT scans 368 Cone beam computed tomography 369 Magnetic resonance imaging 373 Fusion imaging 376	366