

Contents

Videos	viii
Foreword	ix
Preface.....	x
Acknowledgments.....	xi
Contributors	xii
About the Authors.....	xiv
1. Anatomy, Physiology, and Pathophysiology of the Paranasal Sinuses	2
<i>Riccardo Lenzi, Alessandro Vinciguerra, Alberto Maccari, Carlotta Pipolo</i>	
1.1 Maxilla and Maxillary Sinus.....	2
1.1.1 Topographic Anatomy	2
1.2 Endoscopic Anatomy of the Lateral Nasal Wall and Paranasal Sinuses.....	4
1.2.1 Anterior Ethmoid Sinus	5
1.2.2 Frontal Sinus	7
1.2.3 Posterior Ethmoid	8
1.2.4 Sphenoid Sinus.....	9
1.2.5 Anterior Skull Base	9
1.3 Microscopic Anatomy of the Sinonasal Mucosa.....	10
1.4 Elements of Physiology.....	10
1.4.1 Mucus.....	11
1.4.2 Defensive Role of the Sinonasal Mucosa ..	11
1.5 Pathophysiological Implications of Nasal and Sinusal Ventilation.....	12
1.6 Pathophysiology of Odontogenic Rhinosinusitis.....	13
2. Imaging of the Maxilla and Paranasal Sinuses	16
<i>Roberto Maroldi and Andrea Borghesi</i>	
2.1 Techniques of Radiological Examination	16
2.1.1 Panoramic Radiography.....	16
2.1.2 Intraoral Periapical Radiography.....	17
2.1.3 Cone Beam and Multidetector Computed Tomography	18
2.2 Radiological Anatomy of the Maxilla and Paranasal Sinuses	21
2.3 Role of Imaging in the Evaluation and Prevention of Sinonasal Complications following Dental Treatment	21
2.3.1 Introduction	21
2.3.2 Role of Imaging in the Evaluation of Sinonasal Complications after Dental Treatment	24
2.3.3 Role of Imaging in the Prevention of Complications.....	30

3. Paranasal Sinuses: Complications following Dental Pathologies or Treatments ...	40
<i>Matteo Chiapasco, Alberto Maria Saibene, Marco Zaniboni, Pierpaolo Racco, Aldo Bruno Gianni</i>	
3.1 Introduction: Classification	40
3.2 Classic Odontogenic Sinusitis (Group III, Classes 3a, 3b)	40
3.2.1 Introduction	40
3.2.2 Clinical Scenarios	41
3.3 Complications Following the Use of Oral Implants in the Upper Jaw (Infection/Displacement) (Group II, Classes 2a, 2b, 2c, 2d)	45
3.3.1 Introduction	45
3.3.2 Clinical Scenarios	47
3.4 Complications following Maxillary Sinus Grafting Prior to or in Association with Oral Implant Placement (Group I, Class 1a)	52
3.4.1 Elevation of the Sinus Membrane and Grafting of Maxillary Sinus Floor via a Lateral Approach	53
3.4.2 Elevation of the Sinus Membrane through a Crestal Approach	56
3.4.3 Complications	56
4. Microbiology of Odontogenic Sinusitis	66
<i>Lorenzo Drago and Alberto Maria Saibene</i>	
4.1 Introduction: Oral Microbiome and SCDDT	66
4.2 Human Oral Microbiota	66
4.2.1 Definition	66
4.2.2 Microbial Composition	66
4.2.3 Technical Approaches	67
4.2.4 Oral Diseases	67
4.2.5 Nonoral Diseases	68
4.2.6 Future Directions	68
4.3 Pathogens	69
4.3.1 Bacteria	69
4.3.2 Fungi	70
5. Medical Treatment of Odontogenic Sinusitis	76
<i>Antonella D'Arminio-Monforte, Teresa Bini, Alberto Scotti, Alberto Maria Saibene, Carlotta Pipolo</i>	
5.1 Introduction	76
5.2 Treatment of Acute Odontogenic Sinusitis	76
5.2.1 Treatment of the Odontogenic Focus	76
5.2.2 Antibiotic Treatment	77
5.2.3 Systemic Support Treatment	77
5.2.4 Local Treatment	77
5.3 Perioperative Medical Care of Odontogenic Sinusitis	79
5.3.1 Systemic Therapy	79
5.3.2 Local Therapy	79
5.3.3 Fungus Ball	80
6. Surgical Treatment	84
<i>Giovanni Felisati, Matteo Chiapasco, Federico Biglioli, Roberto Borloni, Paolo Lozza, Carlotta Pipolo, Marco Zaniboni</i>	
6.1 Intraoral Approaches	84
6.1.1 Introduction	84
6.1.2 Techniques	86
6.1.3 Clinical Cases (History, Imaging, Treatment, Outcome)	100
6.2 Transnasal Endoscopic Surgery	101
6.2.1 Introduction	101
6.2.2 Surgical Techniques	104

6.2.3	Transnasal Surgical Approach to Complications of Dental Disease and Treatment	115	6.3	Multidisciplinary Approach (Endoscopic and Intraoral).....	120
6.2.4	Clinical Cases (History, Imaging, Treatment, Outcome)	118	6.3.1	Introduction	120
6.2.5	Classification Example	118	6.3.2	Techniques.....	121
			6.3.3	Clinical Cases (History, Imaging, Treatment, Outcome)	123
7.	ENT Contraindications to Maxillary Sinus Grafting Prior To or In Association with Oral Implant Placement	128			
	<i>Giovanni Felisati, Alberto Maria Saibene, Matteo Chiapasco, Sara Torretta, Lorenzo Pignataro</i>				
7.1	Introduction	128	7.4	Treatment of Reversible Contraindications.....	134
7.2	Evaluation of the Candidate for Maxillary Sinus Elevation	128	7.4.1	Medical Treatment of Reversible Contraindications	137
7.2.1	Case History Collection	128	7.4.2	Surgical Treatment with Delayed Maxillary Sinus Grafting	138
7.2.2	Imaging.....	128	7.4.3	Surgical Treatment with Simultaneous Maxillary Sinus Grafting	139
7.3	Reversible and Irreversible Contraindications.....	130	7.5	Clinical Cases	140
7.3.1	Reversible Contraindications	130	7.5.1	Case 1	140
7.3.2	Irreversible Contraindications	132	7.5.2	Case 2	141
	Index.....	145			