

Table of Contents

PART I

Surgical Anatomy of the Head and Neck

- 1 The Neurocranium, 1
Laurence D. Pfeiffer and John N. Phelan
- 2 The Orbit and Eye, 11
Alan S. Herford, Trevor E. Treasure, and Rahul Tandon
- 3 The Paranasal Sinuses, 19
Shyam Prasad Aravindaksha
- 4 The Auditory System, 27
Kyle P. Allen and Peter S. Roland
- 5 The Anatomy of the Face, Mouth, and Jaws, 35
Christopher Morris
- 6 The Salivary Glands, 50
Melvyn Yeoh and Andrew Meram
- 7 The Neck, 57
Jeffrey S. Dean, Rahul Tandon, and Trevor Griffiths
- 8 Fascial Spaces of the Head and Neck, 66
Joseph E. Cillo, Jr.
- 9 Embryology of the Head and Neck, 73
Janine Prange-Kiel

PART II

Oral Surgery

- 10 Routine Extraction of Teeth, 83
Kevin P. Hall and Carrie A. Klene
- 11 Impacted Teeth, 93
Benjamin R. Brown and Mary Ann Sabino
- 12 Canine Exposure, 105
Pamela J. Hughes and Shravan Renapurkar
- 13 Alveoloplasty, 113
Stephanie Joy Drew
- 14 Palatal and Lingual Torus Removal, 120
Gregory M. Ness
- 15 Apicoectomy, 127
Peter B. Franco and Vasiliki Karlis
- 16 Inferior Alveolar Nerve and Lingual Nerve Repair, 137
Leon Assael
- 17 Odontogenic Infection, 145
David W. Lui and A. Omar Abubaker
- 18 Vestibuloplasty, 153
Vincent J. Perciaccante and Sam E. Farish

PART III

Implant Surgery

- 19 Endosseous Dental Implants, 170
R. Gilbert Triplett and Jorge Gonzalez
- 20 Site Preservation and Ridge Augmentation, 184
Joan Pi-Anfruns and Tara Aghaloo
- 21 Distraction Osteogenesis for Height and Width of the Alveolar Crest, 190
Zvi Laster and Ole T. Jensen

- 22 The Maxillary Sinus Lift, 199
Patrick J. Louis
- 23 Endosseous Craniofacial Implants, 210
Bong Joon Jang, Jack H. Koumjian, and Sabine C. Girod
- 24 Implant Rehabilitation and Maxillomandibular Free Flap Reconstruction, 219
Devin Joseph Okay and Daniel Buchbinder
- 25 Implant Salvage Procedures, 232
Christian A. Loetscher
- 26 Prosthodontic Temporization Procedures in Implant Dentistry, 242
Edward R. Schlissel
- 27 Soft Tissue Augmentation Surgery for Dental Implants, 250
James E. Hinrichs, Georgios A. Kotsakis, and Donald E. Lareau

PART IV

Orthognathic and Craniofacial Surgery

- 28 Computer Planning for Orthognathic Surgery, 263
Stephanie Joy Drew
- 29 Genioplasty, 282
Ron Caloss
- 30 Mandibular Subapical Osteotomies, 298
Paulo Jose Medeiros and Fabio G. Ritto
- 31 Intraoral Vertical Ramus Osteotomy, 309
Samuel J. McKenna and James B. Lewallen
- 32 Inverted L Mandibular Osteotomy, 317
Albert D. Oliphant and Joseph E. Van Sickels
- 33 Bilateral Sagittal Split Osteotomy, 324
Joseph E. Van Sickels
- 34 Mandibular Distraction in Infancy for Airway Obstruction, 332
Jocelyn M. Shand
- 35 Mandibular Distraction Osteogenesis in Craniofacial Deformities, 341
Cesar A. Guerrero, Marianela Gonzalez, and Elena Mujica
- 36 The Anterior Segmental Maxillary Osteotomy, 359
Dror M. Allon and Neeraj Panchal
- 37 Surgically Assisted Rapid Palatal Expansion, 371
Jessica J. Lee
- 38 The Le Fort I Osteotomy, 382
Pushkar Mehra and David A. Cottrell
- 39 Le Fort I Segmental Osteotomy, 395
Lewis C. Jones and Peter Waite
- 40 Maxillary Intraoral Distraction Osteogenesis, 405
Cesar A. Guerrero, Marianela Gonzalez, and Mariana Henriquez
- 41 Model Surgery Planning, 416
Joseph J. Fantuzzo and Andrew J. Langston
- 42 Bimaxillary Orthognathic Surgery, 426
Vincent J. Perciaccante and Robert A. Bays

Craniofacial Surgery

- 43 Frontal-Orbital Advancement and Anterior Cranial Vault Reconstruction, 435
Ramon L. Ruiz, Paul S. Tiwana, and David C. Trent
- 44 Posterior Cranial Vault Remodeling, 453
Douglas P. Sinn, Patrick S. Dalton, and Paul S. Tiwana
- 45 Total Cranial Vault Remodeling, 462
Andrew A. Heggie and Anthony D. Holmes
- 46 The Le Fort III Osteotomy, 473
Paul Tiwana and Timothy A. Turvey
- 47 Orbital Box Osteotomy, 487
Likith Reddy and Srinivas Gosla
- 48 Monobloc and Facial Bipartition Osteotomies for the Reconstruction of Craniosynostosis Syndromes, 498
Jeffrey C. Posnick and Paul S. Tiwana
- 49 Techniques for Skull Base and Cervical Spine Access, 529
James B. Holton

PART V

Cleft Lip and Palate

- 50 Unilateral Cheilorhinoplasty, 547
David S. Precious
- 51 Bilateral Cheilorhinoplasty, 554
Ghali Ghali and Jennifer E. Woerner
- 52 Cleft Palate, 561
David Gailey and Kevin Smith
- 53 Techniques in Bone Grafting the Cleft Maxilla, 569
Timothy A. Turvey, Brent Golden, and Carolyn Brookes
- 54 Pharyngoplasty for Velopharyngeal Incompetence, 578
Bernard J. Costello and Ramon L. Ruiz
- 55 Cleft (Secondary) Rhinoplasty in the Adult Patient, 589
Andrew A. Heggie
- 56 Cleft Le Fort Osteotomy, 602
Nabil Samman
- 57 Secondary Surgery in Cleft Patients, 615
John F. Caccamese, Jr.

PART VI

Craniofacial Trauma

- 58 Facial Laceration Repair, 627
Trevor E. Treasure
- 59 Techniques for Maxillomandibular Fixation, 638
Duke Yamashita and Nam Cho
- 60 Surgical Correction of Injuries of the Nasolacrimal System, 645
John Vorrasi and Radhika Chigurupati
- 61 Control of Facial Hemorrhage, 654
Herman Kao
- 62 Principles and Biomechanics of Rigid Internal Fixation of the Mandible, 662
Michael R. Markiewicz and Mark Engelstad
- 63 Dentoalveolar Trauma, 673
Stone Thayer and Ravi Chandran
- 64 Anterior Mandibular Fractures, 680
Brian Best and Stanley Yung-Chuan Liu
- 65 Mandibular Body Fractures, 688
Mark R. Stevens and Hany A. Emam

- 66 Mandibular Angle and Ramus Fractures, 696
Jayini Thakker, Rahul Tandon, and Jason Rogers
- 67 Mandibular Condylar Fractures, 705
Likith Reddy and Curtis M. Bishop
- 68 Atrophic Edentulous Mandibular Fractures, 714
Matthew Madsen, George Kushner, Brian Alpert
- 69 Comminuted Mandibular Fractures, 724
David B. Powers
- 70 Pediatric Mandibular Fractures, 735
Srinivas M. Susarla and Zachary S. Peacock
- 71 Principles and Biomechanics of Rigid Internal Fixation (RIF) of the Midface and Upper Face, 742
Sebastian Sauerbier and Rainer Schmelzeisen
- 72 Nasal Fractures, 751
Shahrokh C. Bagheri and Behnam Bohluli
- 73 Zygoma Fractures, 764
Larry Cunningham, Jr. and Ruba Khader
- 74 Orbital Fractures, 773
Luis Vega, Lance Svoboda, Paul S. Tiwana, and Deepak Kadmani
- 75 The Naso-Orbito-Ethmoid Fracture, 786
John D. Triggs and Stephen P.R. MacLeod
- 76 Le Fort Injuries, 796
Justine Moe and Martin B. Steed
- 77 Pediatric Midface Trauma, 806
Sean P. Edwards
- 78 Management of Frontal Sinus Fractures, 816
David A. Bitonti, Michael A. Gentile, and Amy M. Respondek
- 79 Panfacial Fractures, 829
Alan S. Herford and Rahul Tandon

PART VII

Benign Pathology

- 80 Biopsy Techniques, 840
J. Michael McCoy
- 81 Enucleation and Curettage of Benign Oral and Maxillofacial Pathology, 848
Joseph E. Cillo, Jr.
- 82 Marsupialization, 856
Mehran Hossaini-Zadeh
- 83 Marginal Mandibulectomy, 860
Jasjit Dillon and Karl E. Pennau
- 84 Maxillectomy, 870
Jonathan Bailey, Craig Norbutt, and Blake Kitamura
- 85 Segmental Resection of the Mandible, 878
D. David Kim and George Zakhary
- 86 Sublingual Gland Excision and Ductal Surgery, 883
Brian M. Woo
- 87 Submandibular Gland Excision, 896
Eric R. Carlson and Andrew Wing Cheong Lee
- 88 Superficial Parotidectomy, 911
Daniel Oreadi
- 89 Thyroidectomy, 922
Brendan H.G. Pierce and Maria Evasovich
- 90 Parathyroid Gland Surgery for Hyperparathyroidism, 933
Brett A. Miles
- 91 Thyroglossal Duct Cysts, 944
David Hamlar and James Owusu

- 92 Management of Branchial Cleft Cysts, Sinuses, and
Fistulae, 950
*Tyman P. Loveless, Mehmet Ali Altay,
Zhaoling Wang, and Dale A. Baur*
- 93 Carotid Body Tumor, 960
Julio Acero and Ignacio Ismael Garcia-Recuero

PART VIII

Malignant Pathology

- 94 Excision of Facial Skin Malignancy, 970
Thomas Schlieve and Antonia Kolokythas
- 95 Local Flaps for Facial Reconstruction, 980
Hans C. Brockhoff II and Michael Zide
- 96 Panendoscopy, 1000
Michael R. Markiewicz and Tuan G. Bui
- 97 Cricothyroidotomy and Tracheostomy, 1012
Fayette C. Williams and Brett Shirley
- 98 Local Excision of Oral Malignancy, 1022
Ashish A. Patel and David L. Hirsch
- 99 Glossectomy, 1037
Brian L. Schmidt and Allen Cheng
- 100 Composite Resection, 1049
Robert Ord and Donita Dyalram
- 101 Maxillectomy, 1061
Melvyn Yeoh
- 102 Orbital Resection, 1071
Casper Coppens, Alexander D. Rapidis, and Eric Dierks
- 103 Neck Dissection, 1081
Deepak Kademani and Ketan Patel
- 104 Sentinel Node Biopsy for Oral Squamous Cell
Carcinoma, 1098
Ashish A. Patel and R. Bryan Bell
- 105 Laryngectomy, 1106
Eric Dierks
- 106 Pharyngectomy, 1122
Moni Abraham Kuriakose and Swagnik Chakrabarti

PART IX

Reconstructive Surgery

- 107 Buccal Fat Pad Flap, 1134
Max Diamante
- 108 Tongue Flap, 1138
Daniel J. Meara
- 109 The Palatal Flap, 1146
Sharon Aronovich
- 110 Temporalis Axial Flap, 1152
Jeffrey S. Dean, Rahul Tandon, Nicholas Breig
- 111 Pectoralis Major Myocutaneous Flap, 1159
Ketan Patel and Deepak Kademani
- 112 Submental Island Flap for Reconstruction of Head and
Neck Defects, 1167
Dale A. Baur
- 113 Latissimus Dorsi Flap, 1174
Genevieve C. Bonin and Nicholas M. Makhoul
- 114 Radial Forearm Flap, 1183
Joshua E. Lubek
- 115 Fibula, 1197
Brent B. Ward and David R. Kang

- 116 Scapular Free Flap, 1211
*Anthony B.P. Morlandt, Carlos A. Ramirez, and
Rui P. Fernandes*
- 117 Rectus Abdominis Free Flap, 1221
Andrew Salama and Waleed Y. Zaid
- 118 Deep Circumflex Iliac Artery Free Flap, 1230
Fayette C. Williams
- 119 Anterolateral Thigh (ALT) Free Flap, 1238
Conor Barry and Sat Parmar
- 120 Skin Grafting, 1247
Miller H. Smith and Colin MacIver
- 121 Anterior Iliac Crest Bone Grafting (AICBG), 1261
Ravi Agarwal and George Obeid
- 122 Posterior Iliac Crest Bone Grafting, 1270
Shahid R. Aziz
- 123 Tibial Bone Graft, 1275
George M. Kushner and Brian Alpert
- 124 Costochondral Graft, 1282
Deepak G. Krishnan
- 125 Calvarial Bone Graft, 1289
William J. Curtis, Brent Golden, Michael S. Jaskolka
- 126 Intraoral Bone Harvesting Techniques, 1300
David Yates, Hans C. Brockhoff II, and Richard Finn
- 127 Auricular Cartilage Graft Harvest, 1305
Joli C. Chou

PART X

TMJ Surgery

- 128 TMJ Arthroscopy, 1310
Joseph P. McCain and Reem H. Hossameldin
- 129 Arthroplasty and Eminectomy, 1320
Helaman P. Erickson and John Zuniga
- 130 Total Temporomandibular Joint Replacement
(Custom), 1331
Louis G. Mercuri
- 131 Total Temporomandibular Joint Replacement (Stock), 1341
Eric J. Granquist and Peter D. Quinn
- 132 TMJ Ankylosis, 1352
Daniel Spagnoli
- 133 Combined TMJ and Orthognathic Surgery, 1364
Larry M. Wolford and Reza Movahed

PART XI

Esthetic Facial Surgery

- 134 Brow Lifting, 1378
Tirbod Fattahi
- 135 Facelift, 1384
Jon D. Perenack
- 136 Blepharoplasty, 1402
Kevin L. McBride
- 137 Nasal Septorhinoplasty, 1417
Tirbod Fattahi
- 138 Otoplasty, 1427
Faisal A. Quereshey and Ashley E. Manlove
- 139 Laser Skin Resurfacing, 1434
Craig E. Vigliante