Index

A
Alveolar distraction osteogenesis (ADO), 105, 106
Anchored disc phenomenon (ADP), 56, 60, 61
Ankylosis, 57
Arthrocentesis
   antibiotics, 46
   calpain, 46
   cartilage proteoglycan components, 46
   complications, 46
   crystal-induced inflammation, 46
   definition, 45
   diagnosis, 65
   diagnostic and therapeutic value, 46
   IgE-containing immune complexes, 46
   incidence, 46
   interleukin-6, 46
   intra-articular fracture, 46
   kinins, pain, 46
   loading test, 56
   local anesthesia, 45
   macroscopic diagnosis, 46
   matrix metalloproteinase, 46
   microscopic analysis, synovial fluid, 46
   nasopharyngeal carcinoma, 58
   plastic models, 45
   prostaglandins, 46
   rheumatoid arthritis patients, 46
   septic arthritis, hemophilic patients, 46
   and splint therapy, 66
   succinic acid, 46
   symptomatic relief, 45
   therapeutic substance, 45
   three-way stopcock, 46
   thromboxane B, 46
   traumatic synovitis, 45
   vascular endothelial growth factors, 47
Autoimmune diseases, 122
Autoimmune inflammatory arthritis, 65

B
Bioengineered organ germ method, 196
Biomaterials
   extracellular matrix derivatives, 195
   hydrogels, 193, 194
   shape memory, 194
   surgical delivery, 194
   Bioscaffolds, minimally invasive delivery, 195
Bone-added osteotome sinus floor elevation (BAOSFE) technique, 170
Bony ankylosis, 26
Broncho-electroscopes, 9

C
Cell delivery, endoscopic and arthroscopic techniques, 195
Cell homing, 192
   amoeboid movements, 186
   application, 189
   devices and in vitro design
      biomimetic scaffolds, 192
      cellular niche, 192
      endothelialization, 192
      release technology, 192
   hematologic stem cells, 188
   in situ periodontal regeneration, 189
   interstitial stem cells, 186, 188
   mobilized intravascular, 186
   molecular factors, 186
   regulation of, 186
   self-healing mechanism, 186 (see also Tissue engineering)
   tissue matrix, 186
   tissue-specific architecture, 186
Cell therapy, 195
Chronic venous insufficiency, 192
Condylar fractures
   open repair, 75
   treatment, 75

D
Deficient alveolar bone, 105, 106
Dental Endoscope, 164, 165
Disc displacement with reduction (DDwR), 52
Disc displacement without reduction (DDwoR), 60
Distraction osteogenesis (DO), 16–18, 100
clinical application, 99
deficient alveolar augmentation, 105
devices, 101
  bidirectional, 100
  multidirectional, 100
  unidirectional, 100
in mandible, 100, 102
in maxilla and midface, 103–105
stages, 100
tension-stress principle, 99
DIVA Smart Implant, 165
Double-puncture arthroscopy technique, 22
Duct avulsion, 139
Ductal stretching technique, 130, 132
Dynamic implant valve approach (DIVA) implants, 165

E
Endoscopic-assisted sinus floor elevation
  dynamic implant valve approach, 172, 173
membrane integrity, 172
Endoscopic condylar repairs, 76
  anatomic location, 80
  Brow retractor, 78
  complications, 80
  condylar head dislocation, 80
  fracture displacement, 80
  hemostasis, 77
  history, 76
  Notch retractor, 78
  physiotherapy, 80
  postoperative Panorex image, 80
  screw placement, 78
  subcondylar curved elevator, 77
  surgical management, 80
  threaded fragment manipulator, 78
  transcervical technique, 78, 79
  transoral approach, 77, 78
  transoral vs. transcervical, advantages and
disadvantages, 80
Endoscopic sialolithotomy, 128
Endoscopic sialolithotomy face-lift approach, 133
Endoscopy-assisted intraoral surgery, 125, 128, 130
Endoscopy, implant surgery
  assistance, 166
  bone conditions, 166
  and computerized guided implant surgery, 166
  implant site preparation, 166
  irrigation procedure, 166
  suction, 166
Extracapsular dissection (ECD), 149, 150, 152,
  153, 157
  blunt dissection, 149
  magnification and facial nerve monitoring, 151
  preauricular incision, 151
Extracorporeal lithotripter, 124, 125
Extracorporeal shock-wave lithotripsy, 124, 136
  and sialoendoscopy, 137, 138

F
Face-lift technique, 134
Fine needle aspiration cytology (FNAC), 150, 151
Frey’s syndrome, 11, 149, 157

G
Gastrointestinal endoscopy, 196

H
Heart valve replacement technologies, 190
Hemarthrosis, TMJ, 64
Horsley-Clarke apparatus, 13
Hydrophilic lubrication, 49
Hyposalivation/xerostomia, 196

I
Ilizarov’s approach, 16
Implantation techniques in dentistry
  blind drilling and insertion procedures, 163
  bone density and implant stability, 164, 169
  navigation equipment, 163
  sinus lifting intervention, 164
  Interocclusal appliance (IOA), 53
  Intraoperative navigation, 12, 13
  Intraoral curvilinear distraction devices, 100
  Irrigation, sialoendoscopy, 128, 130, 133

J
Juvenile rheumatoid arthritis (JRA), children, 65

L
Large parotid gland pleomorphic
  adenoma, 153
Le Fort I osteotomies
  complications, 110
  endoscopic visualization, 111
  insufficient vascularity, 110
  maxillary positioning, 115
  pterygoid plate fracture, 110
  retractors, 111
  temporary anchorage device, 113
Lingual nerve paresthesia, 141
Lonsdale-Hill apparatus, 18
Lynch external ethmoidectomy approach, 87

M
Mandibular distraction, 100–102
Maxillary distraction devices, 103, 104
Maxillary sinuses
  anatomy, 167, 168
  antero-posterior crestal incision, 173
  biological role, 167
  bone quantity and quality, 168
<table>
<thead>
<tr>
<th>Floor elevation</th>
<th>Onlay bone grafts, 180</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endoscopy and DIVA implants, 170, 171</td>
<td>Operative single-cannula arthroscopy (OSCA), 30–33, 35, 37, 38, 40–43</td>
</tr>
<tr>
<td>Indications and contraindications, 169, 170</td>
<td>Advantages, 39, 40</td>
</tr>
<tr>
<td>Graft placement, 175</td>
<td>Arthrocentesis, diagnostic visualization, 32</td>
</tr>
<tr>
<td>and implant insertion, 174, 175</td>
<td>Anterior recess, 35</td>
</tr>
<tr>
<td>Lifting</td>
<td>Articular disc, 33</td>
</tr>
<tr>
<td>Complications, 175</td>
<td>Articular eminence, 33</td>
</tr>
<tr>
<td>Endoscopic closed sinus elevation, 175</td>
<td>Intermediate zone, 35</td>
</tr>
<tr>
<td>Implant insertion and sinus membrane elevation, 176</td>
<td>Medial synovial flare, 31</td>
</tr>
<tr>
<td>Prosthetic/prosthodontic goal, 179</td>
<td>Pterygoid shadow, 31, 32</td>
</tr>
<tr>
<td>Pterygoid implants, 180</td>
<td>Retrodiscal synovium, 32</td>
</tr>
<tr>
<td>Short implants, 179</td>
<td>Complications</td>
</tr>
<tr>
<td>Technical modifications, 171</td>
<td>Cranial nerve V/VII damage, 42</td>
</tr>
<tr>
<td>Tilted implants, 180</td>
<td>Fibrocartilage scuffing, 42</td>
</tr>
<tr>
<td>Zygomatic implants, 180</td>
<td>Glenoid fossa perforation, 43</td>
</tr>
<tr>
<td>Liquid/jelly materials, 175</td>
<td>Instrument failure, 43</td>
</tr>
<tr>
<td>Mucoperiosteal flaps, 175</td>
<td>Vessels and hamartosis damage, 43</td>
</tr>
<tr>
<td>Postoperative care, 175</td>
<td>Disadvantages, 39, 40</td>
</tr>
<tr>
<td>Preoperative planning, 173</td>
<td>Hand/mechanical instruments, 35</td>
</tr>
<tr>
<td>Presurgical evaluation, 173</td>
<td>Holmium:YAG laser settings, 29, 37</td>
</tr>
<tr>
<td>Second-stage surgery, 175</td>
<td>Intra-articular medications</td>
</tr>
<tr>
<td>Maxillofacial surgery, 16</td>
<td>Hyaluronic acid, 40</td>
</tr>
<tr>
<td>Dental implantation procedures, 10</td>
<td>Local injection of Botox, 40</td>
</tr>
<tr>
<td>Description, 9</td>
<td>Platelet concentrates, 41</td>
</tr>
<tr>
<td>Endoscopically assisted root canal treatment, 10</td>
<td>Steroid injection, 40</td>
</tr>
<tr>
<td>Implantation surgery, 12</td>
<td>One-track arthrocentesis, 31, 32</td>
</tr>
<tr>
<td>Parotid and submandibular sialadenectomy, 10</td>
<td>Post-OSCA patient management</td>
</tr>
<tr>
<td>Peroral endoscopy, 9</td>
<td>Anesthesia, 41</td>
</tr>
<tr>
<td>Salivary glands, 10, 11</td>
<td>Antibiotics, 41</td>
</tr>
<tr>
<td>Surgical microscopes, 12</td>
<td>Anti-inflammatory and pain management, 41</td>
</tr>
<tr>
<td>Universal non-slipping forceps, 9</td>
<td>Liquid diet, 42</td>
</tr>
<tr>
<td>McCain triangulation technique, 22</td>
<td>Spastic perimandibular musculature contractions, 41</td>
</tr>
<tr>
<td>Midface distraction, 103, 104</td>
<td>Retrodiscal synovium, 39</td>
</tr>
<tr>
<td>Minimally invasive (MI) surgery</td>
<td>Single- and double-puncture arthroscopy, 29</td>
</tr>
<tr>
<td>Advantages, 185</td>
<td>Surgical interventions</td>
</tr>
<tr>
<td>Desormeaux endoscope, 5</td>
<td>Anterior release, 37</td>
</tr>
<tr>
<td>Endoscopic approach, 11</td>
<td>Posterior scarification/contracture, 38</td>
</tr>
<tr>
<td>Endoscopic self-examination, 10</td>
<td>Sequential lysis, adhesions, 35</td>
</tr>
<tr>
<td>Endoscopy development, 2, 3, 5–7</td>
<td>Synovectomy, 37</td>
</tr>
<tr>
<td>History of, 1</td>
<td>Visually guided injection, 35, 36, 40, 41</td>
</tr>
<tr>
<td>Iatrogenic trauma, 185</td>
<td>Operative single-cannula arthroscopy</td>
</tr>
<tr>
<td>Riechert-Mundinger device, 15</td>
<td>(OSCA) technique, 22</td>
</tr>
<tr>
<td>Stereotactic machine, 14, 15</td>
<td>Orbital blowout fractures (OBFs)</td>
</tr>
<tr>
<td>Tricoordinate system, 15</td>
<td>Anatomic structures, 84, 85</td>
</tr>
<tr>
<td>Modular dental endoscope, 123</td>
<td>Awake forced duction test, 93, 96</td>
</tr>
<tr>
<td>Modular sialendoscope, 123</td>
<td>Description, 83</td>
</tr>
<tr>
<td>Musculoskeletal (MSK) tissue regeneration, 190</td>
<td>Disadvantages, 96</td>
</tr>
<tr>
<td>Myofascial pain dysfunction (MPD) syndrome, 23</td>
<td>Endoscopic exploration, 94</td>
</tr>
<tr>
<td></td>
<td>Endoscopic reconstruction, 89</td>
</tr>
<tr>
<td></td>
<td>Endoscopic surgical approach, 88, 89</td>
</tr>
<tr>
<td></td>
<td>Facial fractures, 84</td>
</tr>
<tr>
<td></td>
<td>Morbidity rates, 83</td>
</tr>
<tr>
<td></td>
<td>Ophthalmologic evaluation, 90–91</td>
</tr>
<tr>
<td></td>
<td>Pre-bent titanium mesh, 88</td>
</tr>
<tr>
<td></td>
<td>Radiological findings, 87</td>
</tr>
<tr>
<td></td>
<td>Reconstruction materials, 87, 88</td>
</tr>
<tr>
<td></td>
<td>Surgery indications, 86, 87</td>
</tr>
</tbody>
</table>

N

Navigation-assisted Le Fort I osteotomy, 111, 112, 115
Non-calculus-related obstruction, 138, 139
Non-Ilizarov approach, 16

O

Obstructive sialadenitis, 122
One-stage transcrestal-approached surgery, 172
Orbital blowout fractures (OBFs) (cont.)
surgical techniques in management, 87
titanium mesh plate, 91, 92
transcutaneous methods, 93
treatment protocol, 90
two-week algorithm, 87
Orthognathic surgery
description, 109
maxillary fixation sufficiency, 111
real-time navigation systems, 110
virtual surgical planning, 110
Osteogenesis, jaws, 16, 17
Osteotome sinus floor elevation (OSFE), 170
Osteotome technique, 173, 174
Parotid gland deep lobe pleomorphic adenoma, 154
Parotid gland pleomorphic adenoma recurrence, 155
Parotid stones, extraoral approach, 132, 133
Parotid surgery
classification, 148
clinical examination, 150
cosmetic impact of treatment, 150
facial nerve palsy, 148
greater auricular nerve, 149
histological classification, 146
history, 146
incidence, 148, 149
modalities progression, 147
nerve dissection, 147
recurrence, 146
rhytidectomy (facelift) incisions, 150
tumour clearance, 148
Parotidectomy variants, 148, 149
Periodontitis, 188–190
Permanent facial nerve palsy (pFNP), 156
Piezoelectric and electrohydraulic devices, 125
Pleomorphic adenomas, recurrence rate, 157, 158
Postoperative gland swelling, 141
Prosthetic rehabilitation, 175
Parotid gland neoplasm classification, 148
Salivary glands disorders, 122
Salivary glands formation, 196
Shock wave unit of Sialowave, 124
Sialadenitis, 122
Sialoendoscopy, 122, 123, 133
of parotid duct, 141
postsurgical complications, 139, 141
removal, stones, 126
Sialolithiasis, 122
approaches, 138
and ESWL, 137, 138
Single-puncture technique, 22
Skin incision technique, 133, 135
Stem cell homing, 188–190
therapeutic tissue regeneration
musculoskeletal defects, 190
periodontitis, 188–190
Stereolithographic model, 113
Stereotaxic approach, 12
Supraperiosteal parotidectomy, 146, 148, 151
Target-specific biomaterial scaffolding system, 186
Temporary facial nerve palsy (tFNP), 156
Temporomandibular disorders (TMD)
AESCULAP endoscopy system, 28
arthroscopic lavage and lysis, 47
articular disc displacement, 47, 52
assessment, 23
clinical signs and symptoms, 56
diagnosis, 23, 24, 47
non-arthroscopic lysis and lavage, 47
pain and dysfunction, 47
patient management, 25
prevalence, 23
surgical interventions, 47
tragocanthal line, 30
treatment, 25, 26, 47
Wilkes classification system, 24
Temporomandibular joint (TMJ)
arthritis, 47
arthrocentesis
clipping joint, 59
clinical examination, 57
complications, 55
contraindications, 55
description, 53
imaging modalities, 57, 59
limited mouth opening, 59
medications, 55
patient-completed questionnaire, 56
patient evaluation, 56
platelet-rich plasma, 55
single-needle cannula method, 55
upper compartment lavage, 55
visual analogue scale, 57
arthroscopy
anatomical description, 22, 23
arthroscopic system, 26
### Index

- cannula, 26, 31
- chondromalacia, 34
- contraindications, 26
- diagnosis, 21
- graspers and biopsy forceps, 27
- indications, 26
- lasers, light, 28, 29
- medial synovial drape, 33
- medical conditions, 26
- nomenclature, 21
- probe, 27
- spinal needles, 28
- synovitis, capillary proliferation, 33
- condyle remodeling potential, 50
- hyaluronic acid, 47
- intra-articular pressure, 51
- joint integrity, 51, 52
- load attenuation, 47, 50
- lubrication system, 47
- lubricin, 47
- osmiophilic layers, embedded vesicular structures, 48
- phospholipids, 48
- remodeling potential, 47
- surface-active phospholipids, 47, 49
- Temporomandibular joint osteoarthritis (TMJOA)
  - chronic inflammation, 62
  - clinical examination, 62
  - hemarthrosis, 64
  - open lock, 64
  - overloading, 62
- symptoms, 62
- treatment approach, 62
- Tension-stress principle, 16
- Tissue engineered heart valve (TEHV), 191
- Tissue-engineered venous valves (TEVV), 192
- Tissue engineering (TE), 2, 16–18
  - biologic constructs, 185
  - biomaterials, 185
  - cell isolation, tissue biopsy, 186
  - from embryology, 196
  - in situ, 196
  - strategy, 187
- Titanium-Aluminum-Vanadium implant, 165
- Transalveolar osteotomy, 173, 174
- Transillumination technique, 135
- Transoral/intraoral surgical approaches, 128
- Tunneling technique, 110

### V
- Valvular heart disease, 190

### W
- Warthin’s tumours, 151
- Wilkes classification, 62

### Z
- Zernov’s invention, 13