Note: Page numbers of article titles are in boldface type.

A
Adolescent internal condylar resorption, 49–54
cause, 49–50
clinical features, 50
imaging, 50
treatment options, 50–54
Allergic reaction, to materials in total joint replacement, 121
Alloplastic implants, complications after TMJ arthroplasty with, 116
Ankylosis, of TMJ, management of, 27–35
costochondral graft for, 29–30
fat graft for prevention of heterotopic bone formation, 32–33
in growing subjects, 30–31
total joint reconstruction for, 31–32
Arthritis, reactive (inflammatory), 54–59
Arthritis, juvenile. See Juvenile idiopathic arthritis.
Arthrocentesis, minimally invasive TMJ surgery with, 69–84
Arthroplasty, complications of TMJ surgery with, 114–116
alloplastic implant, 116
damage to adjacent structures, 115
damage to vessels, 115
diskectomy, 116
Frey syndrome, 116
in patients undergoing multiple operations, 116
infections, 114–115
nerve injuries, 114
Arthroscopic surgery, of the TMJ, 69–84
anatomy for, 72–74
clinical outcomes, 77–79
complications and concerns, 79–81
complications of, 111–114
nerve damage, 112–114
future trends in, 81–82
indications for, 70–71
techniques, 74–77
Autogenous tissue grafts, for congenital deformities involving TMJ, 141–142
costochondral (rib), 142
fibula and metatarsal vascularized grafts, 142
sternoclavicular grafts, 142
vertical ramus osteotomy, 142
Autoimmune diseases, condylar resorption of TMJ in, 59–64
cause, 59
clinical features, 59–60
imaging, 60
treatment, 60–64
Autologous blood injection, for TMJ dislocation, 129

B
Bleeding issues, in TMJ total joint replacement, 117
Blocking procedures, for TMJ dislocation, 132–133
Blood injection, autologous, for TMJ dislocation, 129
Botulinum toxin, for TMJ dislocation, 129–130

C
Complications, of TMJ surgery, 109–124
arthroscopic surgery, 111–114
nerve damage, 112–114
infections, 119–120
total joint replacements, 116–123
allergy to materials, 121
bleeding issues, 117
damage to adjacent structures, 117–119
infections, 119–120
loosening of prosthesis, 120–121
malposition of prosthesis, 119
nerve damage, 116–117
postoperative pain, 122
range of motion, 122–123
recurrent bone formation, 121–122

Computer-assisted surgical simulation, in concomitant total TMJ reconstruction and orthognathic surgery, 37–45
case example, 42–45
indications, 37
protocol for, 39–40
Condylar hyperplasia, of the TMJ, 155–167
classification, 156
complementary tools for diagnosis, 163–166
identifying activity of, 166
type 1, 156–161
clinical diagnosis, 156
features of, 157–159
histologic diagnosis, 159
imaging diagnosis, 156
therapeutic options, 159–161
type 2, 161–163
clinical diagnosis, 161
features of, 157
histologic diagnosis, 161
imaging diagnosis, 161
therapeutic options, 161–163

http://dx.doi.org/10.1016/S1042-3699(14)00144-7
1042-3699/15/$ – see front matter © 2015 Elsevier Inc. All rights reserved.
Index

Condylar resorption, of TMJ, treatment of, 47–67
adolescent internal, 49–54
autoimmune and connective tissue diseases, 59–64
other end-stage TMJ pathologic abnormalities, 64
patient evaluation, 48–49
reactive (inflammatory) arthritis, 54–59
surgical sequencing and considerations, 49
Condylectomy, for hyperplasia of TMJ, 159–161
Congenital deformities, with TMJ malformation,
surgical management of, 137–154
age of surgical intervention, 139–141
autogenous tissue grafts, 141–142
comparative studies of grafts vs prosthesis, 143–144
distraction osteogenesis, 142
hemifacial microsomia, 138–139, 144–152
patient-fitted TMJ prosthesis, 142–143
periarticular fat grafts, 143
Treacher-Collins syndrome, 139, 144–152
Connective tissue diseases, condylar resorption of
TMJ in, 59–64
cause, 59
clinical features, 59–60
imaging, 60
treatment, 60–64
Costochondral grafts, for congenital deformities
involving TMJ, 142
for TMJ ankylosis, 29–30

D
Daury’s procedure, for TMJ dislocation, 131–132
Disc repositioning, of TMJ articular disc, 85–107
clinical case, 101–103
levels of evidence for, 85–87
orthognathic surgery in presence of disc
displacement, 87–90
surgical technique and possible pitfalls,
93–101
three-dimensional quantitative findings, 90–92
Diskectomy, after TMJ arthroplasty, 116
Dislocation, temporomandibular joint, 125–136
acute, 127–129
anatomy, 126–127
chronic, 129
classification, 125–126
definition, 125
minimally invasive/myofascial therapy,
129–131
autologous blood injection/sclerotherapy,
129
botulinum toxin, 129–130
proliferation treatment, 130
temporalis scarification/lateral pterygoid
myotomy, 130–131
open surgical treatment, 131–134
Daury’s procedure, 131–132
eminectomy, 131
other blocking procedures, 132–133
Wolford’s procedure, 133–134
pathogenesis, 127
Distraction osteogenesis, for congenital deformities
involving TMJ, 142

E
Eminectomy, for TMJ dislocation, 131

F
Fat grafts, autologous, in treatment of TMJ ankylosis,
32–33
periarticular, for congenital deformities involving
TMJ, 143
Fibula vascularized grafts, for congenital deformities
involving TMJ, 142
Frey syndrome, after TMJ arthroplasty, 116

H
Hemifacial microsomia, surgical management of,
138–139, 144–152
age of surgical intervention, 139–141
autogenous tissue grafts, 141–142
case example, 147–151
classification, 138–139
clinical and imaging features, 139
distraction osteogenesis, 142
outcome expectations, 151–152
patient-fitted TMJ prosthesis, 142–143
periarticular fat grafts, 143
surgical protocol, 145
surgical sequencing, 145
traditional presurgical planning, 144
virtual surgical planning, 145
Hyperplasia, condylar. See Condylar hyperplasia.

I
Infections, with TMJ arthroplasty, 114–115
with TMJ total joint replacement, 119–120
Inflammatory arthritis, juvenile. See Juvenile
idiopathic arthritis.
Inflammatory arthritis. See Reactive arthritis.

J
Juvenile idiopathic arthritis, 1–10
classification, 1–3
TMJ involvement in, 3–8
imaging investigations, 4
prevalence and clinical manifestations, 3–4
treatment from rheumatologist's viewpoint, 4–8

L

Lateral pterygoid myotomy, for TMJ dislocation, 130–131

M

Malocclusion, TMJ dysfunction due to, 12
Metatarsal vascularized grafts, for congenital deformities involving TMJ, 142
Microsomia, hemifacial. See Hemifacial microsomia.
Minimally invasive surgery, of TMJ, 69–84
  arthroscopic anatomy of, 72–74
  classifications of TMJ internal derangements, 71–72
  clinical outcomes, 77–79
  complications and concerns, 79–81
  future trends in, 81–82
  historical summary, 70
  indications for, 70–71
  surgical techniques, 74–77
Mitek anchor, in disc repositioning, 93
  in treatment of condylar resorption of TMJ, 47–67
Myotomy, lateral pterygoid, for TMJ dislocation, 130–131

N

Nerve damage, with arthroscopic TMJ surgery, 112–114
  with TMJ arthroplasty, 112–114
  with TMJ total joint replacement, 116–117

O

Orthognathic surgery, computer-assisted surgical simulation in concomitant total TMJ reconstruction and, 37–45
  case example, 42–45
  indications, 38
  protocol for, 39–40
  protocol for traditional, 39–40
effects of in presence of TMJ dysfunction, 11–26
  contemporary concepts and future directions, 19–21
  effect of different techniques on, 14–16
  effect of rotation of occlusal plane on, 16–18
  effect on maximum bite force, 14
  effect on the TMJ dysfunction, 12–14
  malocclusion and cause of TMJ dysfunction, 12
  personal experience and research, 23
  in presence of disc displacement, 87–90

P

Pediatrics, adolescent internal condylar resorption, 49–54
  juvenile idiopathic arthritis with TMJ involvement., 1–10
  TMJ ankylosis in growing subjects, 30–31
Periarticular fat grafts, for congenital deformities involving TMJ, 143
Prognathic mandibles, due to condylar hyperplasia of TMJ, 155–167
Proliferation treatment, for TMJ dislocation, 130
Prosthesis, patient-fitted total joint, for congenital deformities involving TMJ, 142–143

R

Range of motion, after TMJ total joint replacement, 122–123
Reactive arthritis, condylar resorption of TMJ in, 54–59
  clinical features, 55–58
  imaging, 58
  treatment options, 59
Rheumatoid arthritis, juvenile. See Juvenile idiopathic arthritis.
Rheumatology, juvenile idiopathic arthritis with TMJ involvement., 1–10

S

Scarification, temporalis, for TMJ dislocation, 130–131
Sclerotherapy, for TMJ dislocation, 129
Seronegative spondyloarthropathy. See Reactive arthritis.
Sternoclavicular grafts, for congenital deformities involving TMJ, 142

T

Temporals scarification, for TMJ dislocation, 130–131
Temporomandibular joint (TMJ) disorders, contemporary management of, 1–167
  ankylosis of, 27–35
  costochondral graft for, 29–30
  fat graft for prevention of heterotopic bone formation, 32–33
  in growing subjects, 30–31
  total joint reconstruction for, 31–32
  complications of surgery for, 109–124
  arthroplasty, 114–116
  arthroscopic surgery, 111–114
  infections, 119–120
  total joint replacements, 116–123
Temporomandibular (continued)
concomitant total joint reconstruction and orthognathic surgery, 37–45
case example, 42–45
indications, 38
protocol for computer-assisted surgical simulation, 40–42
protocol for traditional, 39–40
condylar hyperplasia, 155–167
classification, 156
complementary tools for diagnosis, 163–166
identifying activity of, 166
type 1, 156–161
type 2, 161–163
condylar resorption, 47–67
adolescent internal, 49–54
autoimmune and connective tissue diseases, 59–64
other end-stage TMJ pathologic abnormalities, 64
patient evaluation, 48–49
reactive (inflammatory) arthritis, 54–59
surgical sequencing and considerations, 49
congenital deformities with TMJ malformation, 137–154
age of surgical intervention, 139–141
autogenous tissue grafts, 141–142
comparative studies of grafts vs prosthesis, 143–144
distraction osteogenesis, 142
hemifacial microsomia, 138–139
patient-fitted TMJ prosthesis, 142–143
periarticular fat grafts, 143
surgical management of HFM and TCS, 144–152
Treacher-Collins syndrome, 139
disc repositioning, 85–107
clinical case, 101–103
levels of evidence for, 85–87
orthognathic surgery in presence of disc displacement, 87–90
surgical technique and possible pitfalls, 93–101
three-dimensional quantitative findings, 90–92
dislocation, 125–136
acute, 127–129
anatomy, 126–127
chronic, 129
classification, 125–126
definition, 125
minimally invasive/myofascial therapy, 129–131
open surgical treatment, 131–134
pathogenesis, 127
juvenile idiopathic arthritis, 1–10
classification, 1–3
TMJ involvement tin, 3–8
minimally invasive surgery for, 69–84
arthroscopic anatomy of, 72–74
classifications of TMJ internal derangements, 71–72
clinical outcomes, 77–79
complications and concerns, 79–81
future trends in, 81–82
historical summary, 70
indications for, 70–71
surgical techniques, 74–77
orthognathic surgery effects in presence of, 11–26
contemporary concepts and future directions, 18–21
effect of different techniques on, 14–16
effect of rotation of occlusal plane on, 16–18
effect on maximum bite force, 14
effect on TMJ dysfunction, 12–14
malocclusion and cause of TMJ dysfunction, 12
personal experience and research, 21–23
Total joint prosthesis, patient-fitted, for congenital deformities involving TMJ, 142–143
Total joint reconstruction, computer-assisted surgical simulation in concomitant orthognathic surgery and, 37–45
case example, 42–45
indications, 38
protocol for, 40–42
protocol for traditional, 39–40
for TMJ ankylosis, 31–32
Total joint replacement, complications of TMJ surgery with, 116–123
allergy to materials, 121
bleeding issues, 117
damage to adjacent structures, 117–119
infections, 119–120
loosening of prosthesis, 120–121
malposition of prosthesis, 119
nerve damage, 116–117
postoperative pain, 122
range of motion, 122–123
recurrent bone formation, 121–122
Treacher-Collins syndrome, surgical management of, 139, 144–152
age of surgical intervention, 139–141
autogenous tissue grafts, 141–142
case example, 147–151
clinical and imaging features, 139
distraction osteogenesis, 142
outcome expectations, 149–152
patient-fitted TMJ prosthesis, 142–143
periarticular fat grafts, 143
surgical protocol, 145–145
surgical sequencing-145, 144
traditional presurgical planning, 144
virtual surgical planning, 144

V
Vertical ramus osteotomy, for congenital deformities involving TMJ, 142

W
Wolford’s procedure, for TMJ dislocation, 133–134