Index

Note: page numbers in *italics* refer to figures and tables

abdominal migraine 6, 101, 104–5, 106, 107
diagnosis 105, 106
outcome 107
treatment 107
acceleration/deceleration forces 178
acetaminophen 89
tension-type headache 121
acetazolamide 195
acute headache 49–51
recurrent 52
adolescents
emergency department presentation 47
tension-type headache 121
history taking 14
migraine
disability 35–6
prevalence 33, 35
treatment 36
age, prevalence of headache 33–4
allergy 2–3, 4
food 3
sinus headache 174, 204
allodynia
head 129
see also cutaneous allodynia
Alper disease 113
alternating hemiplegia of childhood 101, 112–13
American Academy of Neurology, neuroimaging practice parameters 25–6
American Academy of Otolaryngology – Head and Neck Surgery (AAO-HNS) 169, 170
American College of Emergency Physicians, policy statement 47
American Migraine Prevalence and Prevention (AMPP) study 33, 34–5, 36
amitriptyline 93, 121
chronic daily headache 133
posttraumatic headaches 183
analgesic agents 136–7
posttraumatic headaches 183, 184
use limitation 136
withdrawal 137
analgesic overuse syndrome 127, 136, 209
analgesic rebound headache 54, 121
treatment 133
aneurysms 50, 207
antibiotics
idiopathic intracranial hypertension 192
sinus headache treatment 174
antidepressants 92, 93
chronic daily headache 133–4
posttraumatic headaches 183–4
antidopaminergic drugs 53–4
antiepileptic drugs 55–6, 92–3
chronic daily headache 134–5
antihistamines 135
antihypertensive medications 92, 93
antiserotonergic medications 92, 93
anxiety, cyclic vomiting syndrome 110
arachnoid cyst 190
arteriovenous malformation 50
ataxia telangiectasia 208
atenolol 135
ATP1A2 gene 66–7
attack frequency/duration 15
audiometric function, benign paroxysmal vertigo 103
auditory phenomena, migraine 72
aura 15, 32, 87
characteristics 71
see also migraine with aura
autoimmune disorders 207
behavioral change 52
behavioral treatments 94–5
benign paroxysmal torticollis 102, 114–15
benign paroxysmal vertigo of childhood 6, 101, 102–4
treatment 104
beta blockers 93, 135, 183–4
biobehavioral therapy 163–8
nonpharmacologic interventions 165–8
pharmacologic adherence 164–5
tension-type headache 121
biofeedback-assisted relaxation therapy 95, 121, 137, 165–8
practice 167–8
relaxation response 167
blood patch 199
blood pressure chronic daily headaches 129–30
see also hypertension
blood tests, chronic daily headaches 130
chronic daily headaches 125–38
classification 126–7
clinical characteristics 128–30
diagnosis 130–1
epidemiology 127–8
management 131–2
prognosis 138
psychiatric interventions 137–8
treatment
  analgesics 135–7
  nonpharmacologic 137–8
  preventive 132–5
chronic migraine 126, 127, 128
preventive therapy 132–3
chronic progressive headache 51–2
chronic tension-type headache 126, 127
classification of headache 7–8, 17–19
  see also International Classification of
  Headache Disorders (ICHD-II); International Headache Society
  (IHS) criteria
clinical approach to child 47
clinical laboratory testing 24, 28
cluster headache 36, 144–8
  acute attacks 147
  chronic 144, 146, 147
  classification 144, 145, 146, 147
  clinical features 145
  episodic 144, 145, 146, 147
  genetic identification 66
  HCRTR2 gene polymorphisms 69
  nitric oxide 72
  probable 144, 152
  prophylaxis 148
  surgical procedures 148
  treatment 147–8
coenzyme Q10 94, 137
cognitive behavioral therapy
  (CBT) 121
cognitive change 50, 52
combined headache 7
comprehensive headache exam 16–17
computed tomography (CT)
  decreased intracranial pressure 198
diagnostic 25, 26
  posttraumatic headaches 182
sinuses 50
subarachnoid hemorrhage 50
concussion 177–9
  return to activity 181–2
  see also postconcussive syndrome
  consciousness alteration 7
  contact-point headaches 175–6
  coping skills 165–6
  posttraumatic headaches 184
cortical spreading depression
  (CSD) 71, 74
cough, primary headache 154, 156
  cranial bruit 88
  criteria for headache 7–8
  cutaneous allodynia 72–3, 92
  cyclical vomiting syndrome 3, 6, 101, 107–12
  attack 110–11
  clinical features 107–8
  differential diagnosis 109
  drink-and-vomit behavior 112
  outcome 109
  prodrome 110
  recovery phase 112
  treatment 109–12
cyclophosphamide 93, 104, 135
  posttraumatic headaches 184
cytomegalovirus (CMV) 50
decongestants, sinus headache
  treatment 174
deep tendon reflexes 52
depression
  chronic daily headache
  association 138
  migraine association 138
diagnostic testing 21–8
diaphragmatic breathing 166
dihydroergotamine (DHE) 53, 56, 57–8, 89
  high-dose protocol 58
  intravenous 91
  low-dose protocol 57–8
  nasal 91
  posttraumatic headaches 184
  side effects 58
  status migrainosus 137
diphenhydramine 111

disability
assessment 15–16, 42
migraine 35–6

divalproate sodium 92, 135
dizziness, chronic daily headaches 129
dopamine 71
dopamine antagonists 71, 91
drawing a headache 22–3
drink-and-vomit behavior 112
dura, irritation 199
dural nerves, irritation 190

economic burden of headache 31
electroencephalogram (EEG) 24, 26–7
  abdominal migraine 105
  alternating hemiplegia of childhood 113
  benign paroxysmal torticollis 114
  emboli 207–8
emergency department
  acute headache 49–51
  acute recurrent headache 52
  chronic progressive headache 51–2
  clinical approach to child 47
differential diagnosis 47, 49–52
  etiologies 46–7
  evaluation in 45–7, 48, 49–52
  primary headache treatment 53–6
emesis see vomiting
encephalitis 209
environment, alteration of interaction 7
environmental factors
  primary headache 65
  tension-type headache 75
epidemiology of headache 31–7
epidural patch 199
epilepsy, benign paroxysmal vertigo
differential diagnosis 103
etiology of headache 46–7
evaluation of headache 13–17
exercise 164
exertion, primary headache 154, 156–7
eye movements 52

family history 16
  migraine diagnosis 88

fat-soluble compounds 194
fever 28, 209, 210
  upper respiratory infection 49–50, 51
  viral infection 46
fluid infection 46
fluid therapy 111
flunarizine 93–4
  alternating hemiplegia of childhood 113
food allergy 3
fundoscopic examination 88
fungal infections 50
gabapentin 92, 135, 152
gait abnormalities 16
  migraine diagnosis 88
  gender, prevalence of headache 34, 35
genetic factors
  primary headache 62–70
  tension-type headache 75
geographical factors 33
guided imagery 166
HCRTR2 gene 69
head, allodynia 129
head circumference 16
  chronic daily headaches 130
  migraine diagnosis 88
head injury 177–9, 183, 206
  axonal disconnection 178
  management 183–5
  neurologic sequelae 179–80
headache examination 16, 22
  comprehensive 16–17
  migraine diagnosis 88
hematemesis 111
hemicrania 2, 8
  paroxysmal 144, 148–50
hemicranium continuum 126, 127, 144, 154, 160
hemiplegia 112–13
hemiplegic migraine 113
herbal remedies 137
herpes simplex virus (HSV) 50
heterocrania 2
historical aspects 1–8
INDEX

217

history taking 14–16, 22
chronic daily headaches 130
family history 16
migraine diagnosis 87
secondary headache 205
HIV infection 50
5HTTLPR serotonin transporter
gene 68
hydration, adequate 164
hydrocephalus, obstructive 52
hypertension
idioopathic intracranial
pressure 192
venous 194–5
hypnic headache 154, 158–9
hypocretin receptor 2 69
ibuprofen 89, 110, 136
immunocompromised patients 50
immunosuppressed patient 28
incidence of headache 31, 32
indomethacin 150
infants, onset of headache 4
infection 209–10
CNS opportunistic 50
lumbar puncture 27
influenza 204
International Classification of Headache
Disorders (ICHD-II)
abdominal migraine 105
alternating hemiplegia of
childhood 113
benign paroxysmal torticollis 114
chronic daily headaches 126
cluster headache 144, 145, 146
criteria 17–19
cyclical vomiting syndrome 108
decreased intracranial pressure 196, 197–8
head and neck trauma headache 180
idioopathic intracranial
pressure 190
migraine diagnosis 83–4, 85, 86, 87
precursors of migraine headache 102
secondary headache 201, 202, 203
sinus headache 170–1
tension-type headache 118, 119
trigeminal autonomic
cephalalgias 144
International Headache Society (IHS)
criteria 5, 8, 17, 31
migraine diagnostic criteria 85
intracranial hypertension,
idioopathic 28, 130, 131, 180, 190–1
lumbar puncture 192, 195
outcome 196
pain 191
treatment 195–6
intracranial pressure, decreased 28, 189, 196, 197, 198–9
classification 196, 197–8
pathophysiology 199
treatment 199
intracranial pressure, increased 28, 51, 189–96
chronic daily headache 130, 131
clinical characteristics 191–2
CSF volume increase 193–4
incidence 191
lumbar puncture 27, 50
outcome 196
pathophysiology 192, 193
treatment 195–6
vascular volume increase 194–5
venous drainage blockage 194
weight reduction 195
intracranial tumors 208–9
intraocular pressure, raised intracranial
pressure 192
KCNN3 potassium channel 69
ketorolac 54–5
lateralizing features 50
levetiracetam 92
lidocaine, cluster headache 147
lifestyle habits 94–5
biobehavioral therapy 163–4
chronic daily headaches 132
lithium 148
local anesthetics, cluster headache 147
lorazepam 110, 111
low-pressure headache 28
INDEX

lumbar peritoneal shunt 196
lumbar puncture 24, 27–8
   chronic daily headaches 130, 131
   CSF pressure 198
   decreased intracranial pressure 196, 197, 198
   idiopathic intracranial hypertension 192, 195
   indications 50
   lymphoma, CNS 50

magnetic resonance angiography (MRA) 207
magnetic resonance imaging (MRI)
   abdominal migraine 105
   alternating hemiplegia of childhood 113
   benign paroxysmal torticollis 114
   benign paroxysmal vertigo 103
   brain tumor 52
   cyclical vomiting syndrome 109
   decreased intracranial pressure 198, 199
   diagnostic 25, 26
   posttraumatic headaches 182
   vascular disorders 207
magnetic resonance imaging, functional (fMRI) 73–4
mealtimes, regular 164
medical history 16, 22, 47
   key information 48
   migraine diagnosis 87–8
medication
   abortive 165
   pharmacologic adherence 164–5
   prophylactic 165
medication overuse headache 125, 127, 136, 209
meningismus 28, 209, 210
meningitis 50, 209
   chronic 131
mental status, alteration 50, 52
5′,10′-methylene tetrahydrofolate reductase (MTHFR) gene 69
metoclopramide 53–4, 91
microarray genomics 70
migraine 4–5
   acute intractable 56
   adolescents 33, 35–6
   auditory phenomena 72
   basilar 67
   behavioral treatments 94–5
   brainstem generator 74
   central sensitization 92
   chronic 126, 127, 128
   preventive therapy 132–3
   classification 19
   diagnosis 51, 83–5, 86, 87–8
   diagnostic criteria 84–5, 86, 87–8
   differences from adult 5
   disability 35–6
   dopaminergic antagonists 71, 91
   dopaminergic model 71, 91
   emergency department presentation 47
   environmental factors 65
   epidemiology 32
   familial hemiplegic 66–7
   family history 8
   frontotemporal 87
   gene polymorphisms 65–7
   headache duration 85
   hemiplegic 113
   historical aspects 2
   hypersensitivity 72–3, 92
   incidence 32
   microarray genomics 70
   neuroimaging 73–4
   neurovascular model 61–2, 71–2
   nitric oxide 72
   pain quality 71–2
   pathophysiology 61–2
   population studies 64–5
   prevalence 3, 5, 32–5
   quality of life 41
   quantitative sensory testing 72–3
   serotonin 67–8, 70–1
   sinus headache differential diagnosis 173–4
   specific genes 65–7
   tension-type headache differential diagnosis 118
   treatment 88–95
INDEX

acut 88–92
emergency room 53–6
prophylactic 92–4
trigger mechanisms 62
twin studies 63–4, 65
variants 6–8, 15, 22
see also abdominal migraine
migraine with aura 32
characteristics 71
ICHDI-II diagnostic sensitivity 85
MTHFR gene polymorphism 69
population studies 62–3
serotonin transporter gene 68
migraine without aura
ICHDI-II
criteria 86
diagnostic sensitivity 85
population studies 62–3
mineral therapies 137
mitochondrial disease 113
mood change 52
morning headache 52
moyamoya disease 208
alternating hemiplegia of childhood
differential diagnosis 113
mucosal contact-point headaches
175–6
muscle-contraction headache 7
Na+/K+ pump 66–7
naproxen 135
nasal mucosa, abnormal contact 175
nasal septal spurs 175
nausea 15, 23
cyclical vomiting syndrome 110, 111
neoplasms 208–9
neurocutaneous disorders 207
neurofibromatosis 208
neuroimaging 24–6
abnormalities 25
chronic daily headaches 130
indications 50
migraine 73–4
posttraumatic headaches 182
primary headache 73–4
primary thunderclap headache 155
secondary headache 205
neurokinin A 70, 72
neurokinins 70
neurologic disorders, primary 206
neurologic examination 16, 22, 46, 49
chronic daily headaches 130
emergency department
presentation 47
key points 52
migraine diagnosis 88
secondary headache 205
neuropeptides 70
neuropsychologic testing, posttraumatic
headaches 182–3
neurotransmitters, primary
headache 70–1
neurovascular model of migraine 61–2,
71–2
new daily persistent headache 126, 127
nitric oxide 72
nonparoxysmal headaches 4
non-steroidal anti-inflammatory drugs
(NSAIDs) 54–5, 89
abdominal migraine 107
chronic daily headache 135
posttraumatic headaches 183, 184
sliding scale use 136
tension-type headache 121
nortriptyline 93, 183
nuchal rigidity 28, 50
obesity, idiopathic intracranial
hypertension 192
occipital headache 46–7, 87
ondansetron 110, 111
optic disc, examination 52
orgasmic headache 157–8
osmophobia 72
otitis media 204, 206
over-the-counter (OTC) medicines 36
overuse 125, 209
oxygen inhalation, cluster
headache 147
pain
bilateral 87
canthal 175–6
catch early strategy 164–5
pain (Continued)
cranial location 15
facial 175
idiopathic intracranial hypertension 191
impact on individual 41
increased intracranial pressure 190
peri-orbital 175–6
quality 15, 71–2
severity 15
unilateral 87, 145
see also abdominal migraine
pain relievers 89
see also analgesic agents
papilledema 46, 52
idiopathic intracranial hypertension 191
weight reduction 195
see also intracranial pressure, increased
parents, economic burden of pediatric headache 31
paroxysmal abdominal pain 6
paroxysmal headaches 3, 4
paroxysmal hemicrania 144, 148–50
indomethacin treatment 150
probable 144, 153
Pediatric Quality of Life Inventory Version 4.0 (PedsQL) 42
PedMIDAS disability measure 42
periodic syndromes 6–8, 101–5
pharyngitis 204, 206
phonophobia 15, 22, 72
photophobia 15, 22, 23, 72
physical activity 164
return after posttraumatic headache 181–2
physical examination 16, 47, 49
chronic daily headaches 130, 131
migraine diagnosis 88
secondary headache 205
platelets, serotonin release 67–8, 70–1
polycystic ovary disease 192
population studies, primary headache 62–5
postconcussive syndrome 177–9
management 183–5
neuropsychologic testing 182–3
post-dural (post-lumbar) puncture headache 196, 197, 198
posterior fossa tumors, benign paroxysmal vertigo differential diagnosis 103
posttraumatic headaches 177–85, 206, 207
classification 180
diagnosis 179–81
evaluation 182
management 183–5
neuropsychologic testing 182–3
prognosis 184–5
return to activity 181–2
potassium channel 69
pounding headache, drawing 23
pregnancy, idiopathic intracranial hypertension 192
preorgasmic headache 157
prevalence of headache 3, 5, 31, 32–4
primary headache 14, 15, 84
characteristics 71–4
cough 154, 156
determination 17
differentiation from secondary 206
environmental influences 65
exertional 154, 156–7
gene polymorphisms 65–7
genetic factors 62–70
hypnic 154, 158–9
ICHD-II criteria 18
inpatient unit management 57–9
microarray genomics 70
neuroimaging 73–4
neuropeptides 70
neurotransmitters 70
neuropsychologic testing 182–3
neuropsychologic testing 182–3
neuropsychologic testing 182–3
neuropsychologic testing 182–3
neuropsychologic testing 182–3
neuropsychologic testing 182–3
prolapson gastropathy 111
pronator drift 52
propranolol 135
pseudotumor cerebri see intracranial hypertension, idiopathic
psychiatric interventions, chronic daily headaches 137–8
psychologic testing, posttraumatic headaches 184
psychosocial functioning 41
quality of life 41–2
assessment 42
chronic daily headaches 125
impact 16
quantitative sensory testing (QST) 72–3
questionnaires 14
racial factors 33, 35
recall bias 31
recurrent headache 7–8, 14, 15
evaluation of child 22
recurrent syndrome 6
relaxation therapy
progressive muscle 166
see also biofeedback-assisted relaxation therapy
respiratory tract infection see upper respiratory infection
rhinosinusitis 169–75
diagnosis 173–4
epidemiology 171–3
treatment 174
riboflavin 94, 137
rizatriptan 90–1
rotational forces, brain 179
SCN1A gene 67
secondary headache 14, 84, 201–10
cause/effect relationship 201
classification 201, 202, 203
determination 17
diagnosis 201–2
differentiation from primary 206
epidemiology 202, 204
evaluation 204–6
ICHDI-II criteria 18–19
infection 209–10
medical–systemic causes 206–7
neoplasms 208–9
onsetting event 204
recurrence absence 201, 202
red flags 204–5
substance-induced headache 209
vascular disorders 207–8
seizure disorders
alternating hemiplegia of childhood 113
benign paroxysmal vertigo differential diagnosis 103
migraine association 3
serotonin 67–8, 70–1
sexual activity, primary headache 154, 157–8
short-lasting headaches 153
shunt malfunction 51
shunts, increased intracranial pressure 196
single photon emission tomography (SPECT) 73–4
posttraumatic headaches 182
Sino-Nasal Outcome Test (SNOT-20) 172, 173
sinus headache 14, 169–75
classification 170–1
diagnosis 173–4
epidemiology 171–3
episodic 202, 204
migraine differential diagnosis 173–4
misdiagnosis 171, 172
treatment 174
sinus polyps 175
sinusitis 50, 206
skin hypersensitivity 72–3
sleep
disturbance with chronic daily headaches 132
regular 163–4
sleep disorders 206
sleep studies, chronic daily headaches 130
socioeconomic status 33, 35
sodium channel, neuronal voltage-gated 67
sodium valproate 55–6, 58–9, 137
space-occupying lesion 51–2
predictive values 24–5
risk 25
sports-related injuries 180
return after posttraumatic headache 181–2
status migrainosus, treatment 91, 137
stents, venous sinus 196
steroids 137, 148
sinus headache treatment 174
STin2 polymorphisms 68
subarachnoid hemorrhage 50
CT scan 50
lumbar puncture 27, 28, 50
substance P 70, 72
substance-induced headache 209
sudden onset headache 50
sumatriptan 90, 152
SUNCT (short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing) 144, 150–2
probable 144, 153
surgical glue 199
surgical procedures
cluster headache 148
increased intracranial pressure 195–6
symptoms, associated 15
syndrome of inappropriate antidiuretic hormone secretion (SIADH) 110, 111
tachycardia 209
tandem gait 52
temperature elevation 209, 210
see also fever
temporomandibular disorder 181
tension-type headache 36, 61, 84, 117–21
chronic 126, 127
diagnosis 117–18, 119
environmental factors 65, 75
epidemiology 120
episodic 75
genetic factors 75
migraine differential diagnosis 118
pathophysiology 74–5
preventive therapy 121
subtypes 118, 119
treatment 120–1
twin studies 64
throbbing sensation 22
thromboses 207–8
thunderclap headache 50, 154, 155, 159–60
tilt-table testing, chronic daily headaches 130
tinnitus, pulsatile 192
topiramate 92, 93, 134, 152, 195
torticollis, recurrent 7
toxoplasmosis 50
transcription factors 72
transformed migraine see chronic migraine trauma
axonal disconnection 178
headache 177–85
sports-related injuries 180
Trendelenburg position 198, 199
trigeminal autonomic cephalalgias 61, 143–53
differential diagnosis 144, 153
probable 144, 152–3
trigeminal neuralgia 152
trigeminal vascular model of migraine 61–2, 71–2
triptans 56, 70–1
abdominal migraine 107
cluster headache 147
migraine treatment 89, 90
posttraumatic headaches 184
rescue therapy 91
sliding scale use 136
tuberculosis, atypical 50
tuberosus sclerosis 208
turbinate abnormalities 175
upper respiratory infection
emergency department presentation 47
with fever 49–50, 51
<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>vascular disorders</td>
<td>207–8</td>
</tr>
<tr>
<td>vascular headache of migraine type</td>
<td>7</td>
</tr>
<tr>
<td>vascular malformations</td>
<td>207</td>
</tr>
<tr>
<td>vasculitis</td>
<td>207</td>
</tr>
<tr>
<td>vasoactive intestinal peptide (VIP)</td>
<td>70</td>
</tr>
<tr>
<td>venous hypertension</td>
<td>194–5</td>
</tr>
<tr>
<td>venous sinus stenting</td>
<td>196</td>
</tr>
<tr>
<td>venous sinus thrombosis</td>
<td>208</td>
</tr>
<tr>
<td>ventriculoperitoneal shunt placement</td>
<td>51, 196</td>
</tr>
<tr>
<td>verapamil</td>
<td>148</td>
</tr>
<tr>
<td>vertigo</td>
<td>103</td>
</tr>
<tr>
<td>viral infection</td>
<td>206</td>
</tr>
<tr>
<td>fever</td>
<td>46</td>
</tr>
<tr>
<td>HIV</td>
<td>50</td>
</tr>
<tr>
<td>secondary headache</td>
<td>204</td>
</tr>
<tr>
<td>vital signs</td>
<td>22, 49</td>
</tr>
<tr>
<td>vitamin A, excessive dietary intake</td>
<td>192</td>
</tr>
<tr>
<td>vitamins, fat-soluble</td>
<td>194</td>
</tr>
<tr>
<td>vomiting</td>
<td>15</td>
</tr>
<tr>
<td>cyclic</td>
<td>3, 6</td>
</tr>
<tr>
<td>morning</td>
<td>52</td>
</tr>
<tr>
<td>nocturnal</td>
<td>52</td>
</tr>
<tr>
<td>von Hippel–Lindau disease</td>
<td>208</td>
</tr>
<tr>
<td>weight reduction</td>
<td>195</td>
</tr>
<tr>
<td>X-rays, sinuses</td>
<td>50</td>
</tr>
<tr>
<td>zolmitriptan</td>
<td>91</td>
</tr>
<tr>
<td>zonisamide</td>
<td>92</td>
</tr>
</tbody>
</table>

Index compiled by Jill Halliday