The targeted headache history is paramount in the diagnosis of headache and facial pain. Through placing symptoms in categories, a clear picture of the headache diagnosis will begin to emerge. The physical examination yields no positive findings in most patients with headache. Medication overuse headache is emerging as a common reason for inability to control headaches.

The most critical element in headache evaluation is the history. The targeted history differentiates primary from secondary headaches and provides a realistic list of conditions associated with secondary headache. Several of these conditions present with specific physical findings, such as papilledema, Homer’s syndrome, or a cranial nerve palsy. The targeted physical examination of the patient with headache takes less than 3 minutes. The ability to recognize a few straightforward clinical findings directs the evaluation in the proper direction.

Blood tests have a minor role in headache management and that role is limited to a few secondary headache conditions. In headache, as with any symptom, laboratory tests should be chosen based on solid clues derived from the targeted history and physical examination. A shotgun approach to blood tests that includes rare diseases or those with low local prevalence frequently yields false-positive results, which exposes the patient to the expense, anxiety, and risk inherent in misdiagnosis. Keep it simple and do not forget about spinal fluid.

Headaches can be benign or life threatening but, with careful attention to the details described in this article, the correct diagnosis and treatment can be arrived at in many cases. Modern imaging techniques have taken the guesswork out of many conditions but a high index of suspicion and attention to red flags helps avoid potential adverse outcomes in headache encounters in a high proportion of cases.
### Imaging in the Evaluation of Headache

Malisa S. Lester and Benjamin P. Liu

Headache is a common symptom with a wide differential and can be due to hundreds of causes. The frequency of pathologic conditions that present with headache is rather low and most headaches are due to benign primary headache disorders. The overall yield of neuroimaging studies for headache without an abnormality on neurologic examination is low. Secondary causes of headache can have devastating consequences or important treatment implications, thus it is important to differentiate between secondary and primary headache disorders. This article reviews when and how to use imaging for headaches, and what abnormalities may be found on these studies.

### Managing and Treating Headache of Cervicogenic Origin

Maunak V. Rana

Cervicogenic headache (CGH) is a controversial topic in the treatment of patients with chronic cephalgia. This article reviews and summarizes the points of contention, historical significance, differential diagnosis, and treatments for CGH. This information will be of benefit to clinicians treating patients with this condition and assist providers in reviewing the literature and treatments for CGH.

### Managing and Treating Tension-type Headache

Frederick Freitag

Although tension-type headache is ubiquitous, only a relatively small percentage of the population has these headaches occurring with sufficient frequency and severity to cause them to seek out medical attention. This small group, however, may have substantial impact from their disease on productivity and quality of life. Assessment of the headaches includes other headache disorders and coexisting diseases that may contribute to the process. Treatment is optimized by appropriate use of acute medications and preventive treatments that may include drugs in the antidepressant classes along with nonpharmacologic modalities and other alternative treatments, such as biofeedback, manual therapy, and use of botulinum toxin type A injections.

### Pain of Ocular and Periocular Origin

Corey W. Waldman, Steven D. Waldman, and Reid A. Waldman

Most diseases of the eye and periocular regions that cause blindness are relatively painless. Headache pain of ocular and periocular origin represent a special challenge to the clinician. For patients with ocular and periocular pain that is unrelated to primary eye disease, identification and treatment of the painful condition usually become the responsibility of the clinician.

### Headache Pain of Ear, Nose, Throat, and Sinus Origin

Steven D. Waldman, Corey W. Waldman, and Jennifer E. Waldman

A significant number of painful conditions of the ear, nose, and throat have the potential to cause considerable morbidity and mortality. The clinician
should also remain vigilant for diseases of this anatomic region that do not cause pain but have the potential, if undiagnosed, to create significant problems for the patient, such as acoustic neuroma, thyroid carcinoma, and malignant melanoma. This article provides the clinician with a concise road map for the evaluation of painful conditions of the ear, nose, sinuses, and throat that may be responsible for headache.

**Trigeminal Autonomic Cephalalgias Other than Cluster Headache** 321

Stephen D. Silberstein and Nailia Vodovskaia

Trigeminal autonomic cephalalgias are short-lasting primary headache disorders associated with autonomic symptoms. Paroxysmal hemicrania is a rare headache disorder similar to cluster headache. Short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT) and short-lasting unilateral neuralgiform headache attacks with cranial autonomic symptoms (SUNA) are unusual headache syndromes typified by a high frequency of severe, brief, unilateral attacks that usually occur in the distribution of the trigeminal nerve. SUNCT is a subtype of SUNA in which both conjunctival injection and tearing are present. SUNA differs from SUNCT in that autonomic symptoms are less prominent.

**Giant Cell Arteritis** 329

Corey W. Waldman, Steven D. Waldman, and Reid A. Waldman

Giant cell arteritis is one of the most serious medical emergencies encountered in the practice of ophthalmology because it may result in loss of vision in one or both eyes. This vision loss is preventable if patients are diagnosed early and treated immediately with high doses of corticosteroids.

**Medication Overuse Headaches** 337

Bernard M. Abrams

Overuse of any class of drugs, Triptans, ergots, opioids, simple, or combination analgesics used to treat acute headaches, especially migraine, can lead to the development of medication overuse headache. People suffering from primary headache types, such as migraine or tension-type headache, are at higher risk to develop chronic headache following the overuse of acute headache drugs. Treatment of medication overuse headache requires withdrawal as an initial step, coincident initiation of preventive treatment, a multidisciplinary setting, and includes education of patients.