Chapter 5: Facial Pain and Headache

Gerald M. English

Headache and facial pains are common complaints in clinical practice. There are few symptoms that bring patients more readily to a physician than a headache or facial pain.

There are several reasons why these problems may be confusing and difficult to diagnose. The innervation of the head and neck is complex. There are many pain-sensitive structures in this region that have widely interrelated neural pathways. Referred (heterotopic) pains are very common and the various pain syndromes may be quite similar. There are a number of associated symptoms that cloud the clinical presentation, including tachycardia, chest pain, nausea, vomiting, abdominal pains, sweating, weakness, fatigue, anxiety, and depression. The patient may not relate these symptoms to the head pain, and may present these problems as the primary symptom.

A systematic, thorough investigation is the best means of making a proper diagnosis; and the history is probably the most important element of that examination. The problem-oriented method is particularly helpful in assessing these problems. This method will ensure that the pain is not overlooked or ignored. As the investigation proceeds each item on the problem list is appraised and a plan should be formulated for that particular symptom.

Nasal Pain

Subjective Complaints

This pain is described as tight, burning sensation of the upper nose and forehead. It is often associated with nasal airway congestion and rhinorrhea. All symptoms are worse at night. Sneezing and blowing the nose may increase the pain. An application of topical decongestant or exercise sometimes relieves the discomfort. Spontaneous nasal bleeding, or bleeding with blowing the nose, is common. A decreased sense of smell (anosmia) is also common. Other abnormalities (parosmia and dysosmia) of the sense of smell are less common but do occur.

Objective Findings

Examination may reveal several abnormalities. The most common are edema and erythema of the nasal mucous membrane, and a deviated or perforated nasal septum. The secretions within the nasal chambers and nasopharynx vary from clear and watery to cloudy and discolored. There may be crusting of the nasal mucous membrane. When the secretions are purulent and present in the area of sinus drainage (superior and middle meatus), a diagnosis of sinusitis should be considered. Occasionally, there is tenderness of the nose when an acute rhinitis is present. If the mucosal edema or engorgement subsides with topical decongestants, a noninfectious etiology is more likely. Polyps may be present, and they do cause some vague discomfort. Nasal polyps are not pain-sensitive to palpation, and they do not bleed readily.
Assessment

The history will usually suggest whether the nasal disease is from an infectious, allergic, or traumatic etiology. A nasal and nasopharyngeal culture should be obtained when infection is suspected. These studies will reveal both normal and pathogenic organisms. Nasal smears may reveal an elevated eosinophil count or large numbers of inflammatory cells. X-ray examinations, including xeroradiograms, will often demonstrate a deviated nasal septum, hypertrophied turbinates, and sinusitis, as well as other abnormalities. The sinuses should be clear unless sinus diseases are present.

Plan

The treatment should be as specific as possible. Analgesics (aspirin, Acetaminophen, Darvon, codeine) are helpful and narcotics are rarely required. If an allergic etiology is diagnosed, antihistamines (Chlor-Trimeton, Pyribenzamine, Benadryl, etc) are essential for the initial management. Allergy testing and desensitization should be considered for those patients who do not respond to medical treatment or have advanced disease. Topical decongestants (Neo-Synephrine, Otrivin, Afrin) and systemic decongestants, pseudoephedrine hydrochloride (Sudafed) and phenylephrine hydrochloride (Neo-Synephrine) will often reduce the engorgement and improve the nasal airways. Steroids, either topically (Decadron Turbine, Vanceril) or systemic (prednisone, Medrol) on a short-term declining schedule should be reserved for those patients who do not respond to simpler methods of treatment. When the patients fail to respond, and there are few or no nasal abnormalities, a psychogenic etiology should be suspected. Nasal septal surgery or turbinectomy is reserved for patients with specific abnormalities or advanced disease. Nasal septal perforations can sometimes be repaired surgically or treated with a Silastic stent.

Sinus Pain

Subjective Complaints

Headaches from sinus disease are rare but local facial pain is common. The location of the pain is related to the sinus involved and referred pain is more or less specific for the various sinuses (Table 5.1). The other symptoms of sinus disease include rhinorrhea, postnasal drainage, epistaxis, facial swelling, or redness and fullness of areas of the face or ear. Sinus pain characteristically begins in the morning or early afternoon. It subsides later in the early or late evening. The pain is often increased by shaking the head, bending over, or straining and coughing. A tight collar that increases venous pressure in the head and neck may also increase sinus pain. Menstruation, cold air, sexual excitement, and alcohol all produce engorgement of the nasal mucosa and, thereby, increase the intensity of the pain. The barometric changes encountered during flying or scuba diving will often cause patients with thickened sinus mucosa to have extreme pain. This pain is a diffuse, sustained, deep-aching, and non-pulsatile sensation. Lacrimation, photophobia, and hyperalgesia are common.

Objective Findings

The clinical findings vary depending upon the sinus involved and whether the affected sinus ostium is open or closed. These clinical findings are also related to whether or not the
disease is acute or chronic. Ocular, visual, nasal, neurologic, dental, and local signs are seen in various combinations (Table 5.2).

### Table 5.1. Homotopic and Heterotopic Pains Associated with the Paranasal Sinuses

<table>
<thead>
<tr>
<th>Sinus Involved</th>
<th>Local Pain</th>
<th>Referred Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxillary</td>
<td>Cheek, nose, upper lip and upper teeth</td>
<td>Retro-orbital and mandibular teeth</td>
</tr>
<tr>
<td>Ethmoid</td>
<td>Retronasal and retro-orbital</td>
<td>Occipital and upper cervical</td>
</tr>
<tr>
<td>Sphenoid</td>
<td>Retro-orbital and retronasal</td>
<td>Bitemporal, frontal, vertex, Occipital, shoulder, mastoid, and canine toothache</td>
</tr>
<tr>
<td>Frontal</td>
<td>Frontal and supraorbital</td>
<td>Bitemporal and occipital headache.</td>
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</tbody>
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### Assessment

An x-ray examination of the paranasal sinuses is essential for diagnosis. Specimens from the sinuses should be cultured to identify the causative agents. When a neoplasm is suspected, tissue biopsies from the sinus should have a histopathologic examination.

### Table 5.2. Clinical Findings in Sinus Disease

<table>
<thead>
<tr>
<th>Sinus Involved</th>
<th>Clinical Signs</th>
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<tbody>
<tr>
<td>Maxillary</td>
<td>Ocular abnormalities, including diplopia, proptosis, and epiphora</td>
</tr>
<tr>
<td></td>
<td>Nasal obstruction and rhinorrhea</td>
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<tr>
<td></td>
<td>Epistaxis</td>
</tr>
<tr>
<td></td>
<td>Loose teeth and ill-fitting dentures</td>
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<tr>
<td></td>
<td>Palatal, facial, and gingivobuccal swelling</td>
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<tr>
<td></td>
<td>Hypesthesia of the upper teeth, the cheek, and the upper lip</td>
</tr>
<tr>
<td></td>
<td>Trismus</td>
</tr>
<tr>
<td>Ethmoid</td>
<td>Evidence of pansinusitis, except in children</td>
</tr>
<tr>
<td></td>
<td>Orbital swelling and orbital tenderness</td>
</tr>
<tr>
<td></td>
<td>Proptosis and diplopia</td>
</tr>
<tr>
<td></td>
<td>Nasal obstruction and purulent rhinorrhea</td>
</tr>
<tr>
<td></td>
<td>Tenderness over inner canthus of eye</td>
</tr>
<tr>
<td>Sphenoid</td>
<td>Stiffness of the neck</td>
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<tr>
<td></td>
<td>Postnasal drainage</td>
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<tr>
<td></td>
<td>Forgetfulness</td>
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<tr>
<td></td>
<td>Perversions of the sense of smell</td>
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<tr>
<td></td>
<td>Cough</td>
</tr>
<tr>
<td></td>
<td>Anorexia and vertigo</td>
</tr>
<tr>
<td></td>
<td>Visual disturbances</td>
</tr>
</tbody>
</table>
Frontal Nasal obstruction and rhinorrhea
Pus in the nasofrontal duct and anterior part of the middle meatus
Tenderness over the frontal sinus along its floor
Pitting edema over the frontal sinus
Redness and local tenderness
Signs of meningitis or intracranial infection.

Pain

Simple analgesics (aspirin, Acetaminophen, codeine) will usually relieve the discomfort. Antibiotics are useful for those patients with an active infection. Decongestants, either topically or systemically, will help relieve nasal engorgement and improve drainage of the sinuses through the natural ostia. Increased humidity will made the nasal and paranasal sinus secretions less tenacious, and this facilitates removal of the materials from the nose and sinuses. Drainage and irrigation of the sinuses are often necessary, both for treatment and for diagnosis of the specific etiology. These techniques should be performed by an otolaryngologist, or a physician with specialized training and experience.

Oral Dental Pain

Subjective Complaints

The pain from oral or dental diseases is usually more severe at night. These pains occur at the site of the disease (teeth, mandible, maxilla, tongue, palate or mucosa), but may be referred to distant areas. Thermal or mechanical stimulation (chewing and swallowing) often aggravates or intensifies the pain. Hot and cold foods and drink are the most notorious offenders. A history of dental disease, trismus, difficulties with chewing (mastication), dry mouth (xerostomia), or increased salivation (ptyalism) are fairly common.

Objective Findings

Dental caries, ulcerations of oral mucosa, and mass lesions are the most common clinical findings. Palpation and percussion of the teeth or other oral structures will often elicit the symptom of pain. Edentulous patients may have retained tooth fragments that are inciting the pain.

Assessment

An x-ray examination of suspicious areas will usually reveal any underlying dental or bone disease. Many patients should be referred to a dentist for more extensive studies and treatment. Laboratory tests, including complete blood count, serologic test for syphilis, and biopsy of suspicious lesions will help determine the proper diagnosis.

Plan

Those patients who have pain from dental disease will require appropriate dental care, but analgesics will make the patient more comfortable until the dentist can begin treatment. Antibiotics should be used in those patients who have infection. A biopsy of suspicious
lesions and histopathologic study of the tissue is essential. Neoplasms must be differentiated from the oral lesions of pernicious anemia, polycythemia, agranulocytosis, leukemia, avitaminosis (vitamin B₂ complex-pellagra and vitamin C - scurvy). Specific therapies for those problems are beyond the scope of this book.

**Temporomandibular Joint Pain**

**Subjective Complaints**

The pain varies from a dull, recurring ache over the temporomandibular joint to an intense, agonizing, short spasm of pain that radiates into the cheek, temple, lower jaw, ear, mastoid area, or upper neck. The pain is often associated with chewing, talking, or yawning. There may be an associated trismus or stiffness of the jaw. Malocclusion, subluxation, and "clicking" of the joint also occur. Anxiety, grinding the teeth (bruxism), dental repair, or extractions and trauma to the mandible are the most common causes of this disease.

**Objective Findings**

Clicking, crepitus, tenderness on palpation, malocclusion, poorly fitting dentures, and loss of teeth are the most common clinical findings. A normal external auditory canal and tympanic membrane in patients with an earache should alert the physician to consider this disease as the cause of the otalgia. Tenderness and spasm of the muscles of mastication and a diminished range of motion of the mandible are common findings in this disease.

**Assessment**

An x-ray examination of the temporomandibular joint will reveal any structural or degenerative changes in the joint. Both an open and closed mouth view are essential for a complete examination. Dramatic but temporary relief of the pain can be obtained with an injection of a small amount of local anesthetic (Xylocaine 2%) into the joint area or the petrotympanic fissure. This technique may be necessary to establish the correct diagnosis.

**Plan**

Analgesics are helpful but narcotics are rarely necessary. Temporomandibular joint exercises (Table 5.3) will help the patient relax the muscles of mastication and increase the range of motion of the lower jaw. These exercises should include chewing on both sides of the jaw. Muscle relaxants will reduce muscle spasm and fatigue. A bite plate or block can be used to reduce bruxism during sleep. Correction of occlusion discrepancies or problems by replacing missing teeth and restoration of the dentures is required for relief in appropriate patients.

Steroid injection into the affected joint is helpful but it should be followed by appropriate treatment of the causes of the disorder. Surgical treatment consists of condylectomy or condylotomy, and this form of therapy should be reserved for those patients who do not respond to other methods of treatment.
Carotidynia

Subjective Complaints

The attacks of pain are periodic, unilateral and not ordinarily associated with visual disturbances. A dull, aching sensation is usually described. The pain is referred to the eye, deep malar region, and spreads to the back of the ear and down the neck. Gastrointestinal symptoms such as abdominal pain, nausea, vomiting, and diarrhea are common. There is often a history of confusion, lethargy, depression, and insomnia. The patient is usually asymptomatic between the attacks of pain.

Table 5.3. Exercise Program for Temporomandibular Joint Disorders

1. Open and close the mouth as widely and as rapidly as possible.

2. Open the mouth against slight pressure applied by placing the open palm beneath the chin.

3. Close the mouth against slight pressure applied by placing the open palm above the chin.

4. Move the mandible from side to side without resistance; then move it from side to side with pressure from the palm of the hand against the side of the chin.

5. Protrude the jaw with and without resistance.

6. Chew a small piece of wax on each side, and then in the center for 3-5 minutes. Repeat each exercise five times, twice a day. Increase at a rate of five times each week to a maximum of 25 exercises twice a day.

Objective Findings

There are swelling and tenderness of the carotid artery on the affected side. The pain is accentuated by palpation of the carotid artery and can be produced by pressing the carotid artery backward against the cervical transverse process. A conspicuous pulsation of the carotid artery is present in some individuals.

Assessment

These patients have many of the general features of migraine headache. This pain, however, does not subside with ergotamine tartrate. The patients appear to be quite ill. The face is pale, sallow, and often covered with a light oiliness or sweat. There may be a slight edema of the affected side of the neck and face. The patient complains of a lack of vigor and exhibits overall lassitude. Laboratory and x-ray examinations are usually normal.
Plan

Analgesics are necessary for symptomatic relief. When the pain is of low intensity, 0.3-0.6 g of aspirin or 60 mg of codeine are sufficient for control of the symptom. These patients do not obtain relief from ergotamine tartrate. Ergotamine tartrate may be used to help differentiate carotidynia from other vascular headaches (migraine, cluster headache). They may have an exacerbation of their symptoms with various vasodilators. Reassurance regarding the nature of the disorder will help relieve the patient's anxiety. A change in life style may be beneficial when stress is a factor precipitating the pain. Avoiding tight, constricting collars or other garments may be helpful. There is no specific therapy but steroids and other anti-inflammatory agents are sometimes helpful.

Neuralgias

Trigeminal Neuralgia (Tic Douloureux)

Subjective Complaints

This is an episode, unilateral recurrent facial pain that occurs most commonly in patients between the ages of 30 and 60 years. The pain is experienced chiefly over the area of the face supplied by the second division of the trigeminal nerve and less often in those areas supplied by the first and third divisions of the Vth cranial nerve. The pain is a high intensity "jab" of 20-30 seconds' duration. It is also described as an aching, burning sensation that may occur spontaneously. Cold air, a light touch, chewing, swallowing, laughing, talking, yawning, sneezing, and blowing the nose or drinking cold water will often precipitate an attack of pain. The most common "trigger" site is the lateral border of the nose. The attacks may occur at any time during the day or night but seldom begin during sleep unless the face is inadvertently rubbed. Anxiety, tension, fatigue, and stress may cause the attacks of pain. The pain may disappear for weeks or months but spontaneous recovery is rare.

Objective Findings

There is no demonstrable neurologic defect of motor or sensory function. Occasionally, a mild hyperalgesia during the attack and a minimal hypalgesia of the face between attack is noted. During the attack, the cheek is reddened, the tongue is furred, and the eyes are watery. There is a cramped facial expression. Between attacks, the patient holds his face immobile and talks cautiously through closed lips and jaws. The affected side of the face is often soiled and unshaven. These patients report that the face washing or shaving precipitates the pain.

Assessment

Laboratory and x-ray examinations are normal.

Plan

Because the pain has such a short duration, analgesics are of limited value. Trichloroethylene inhalations often give prompt but temporary relief. Dilantin (100 mg three times daily) may be beneficial. Benadryl has also been used with some success.
Carbamazepine (Tegretol), 400 mg per day up to 800 mg per day, may give complete or partial relief of the pain. Those patients who do not respond to medical therapy should have injection or surgical ablation of the affected nerve. These procedures require the special skills of a neurosurgeon.

Glossopharyngeal Neuralgia

Subjective Complaints

This is a severe, episodic pain in the region of the tonsil and ear. The pain is usually initiated by yawning, swallowing, or food and water that come in contact with the tonsillar area. The quality, onset, duration, and frequency of the pain are quite similar to those of trigeminal neuralgia. Syncope may occur during the attack from cardiac slowing or cardiac arrest.

Objective Findings

There are no neurologic abnormalities. Palatal and pharyngeal mobility are unimpaired and the "gag" reflex is intact.

Assessment

Laboratory studies and x-ray examinations are usually normal.

Plan

Analgesics are of limited value. A topical anesthetic spray (Cetacaine) applied to the trigger zone may give temporary relief. The other forms of treatment for this neuralgia are similar to those used for trigeminal neuralgia.

Sphenopalatine Neuralgia (Lower-Half Headache, Sluder's Headache)

Subjective Complaints

This pain involves the lower one-half of the face below the ear. It is episodic, recurrent and lasts from a few minutes to several days. There are two sites of maximum pain: (1) the orbit and base of the nose, and (2) the mastoid process. The most common site is the orbit and nose. In addition to an earache, fullness in the ear, tinnitus, and vertigo are sometimes reported. Unilateral nasal airway congestion and rhinorrhea are also present during the attack. The pain may spread down the neck to the shoulder. Itching of the skin, taste disturbances, and stiffness and weakness of the shoulder muscles are not rare. The pain may emanate from the teeth of the upper and lower jaws with an associated tingling of the skin of the lower jaw.
**Objective Findings**

Examination will not reveal any specific abnormalities. There are occasional patients who have a deviated nasal septum or nasal septal spur. This is important to detect because these patients often respond to appropriate surgical treatment of the nasal abnormality.

**Assessment**

The pain is usually relieved by an application of cocaine to the sphenopalatine ganglion region in the posterior nasal chamber. Injections of the sphenopalatine ganglion with a local anesthetic (Xylocaine) through the greater palatine canal will produce prompt relief of the pain.

X-ray examination of the nose, paranasal sinuses, teeth and ear are usually normal.

**Plan**

Analgesics are of limited value. Cocainization or injections of the sphenopalatine ganglion will give relief. Nasal septal operations have been reported as an effective treatment for the pain in some patients. Resection of the sphenopalatine ganglion may be of value but should be reserved for patients with pain that does not respond to other forms of treatment. A neurosurgeon or otolaryngologist should be consulted regarding this procedure.

**Vidian Neuralgia**

**Subjective Complaints**

This pain is located in the nose, face, eye, ear, head, neck, and shoulder. The attacks are episodic, unilateral, and often nocturnal. The pain is not precipitated by external stimulation. A unilateral nasal airway congestion and rhinorrhea are often associated with this pain. This pain syndrome is similar to the pain of sphenopalatine neuralgia and may be indistinguishable from that entity.

**Objective Findings**

There is no associated loss of sensory or motor function. Engorgement of the nasal mucosa and increased secretions are seen on one side of the nose in some patients.

**Assessment**

An x-ray examination of the paranasal sinuses may reveal sphenoid sinus disease. This has been specifically related to Vidian neuralgia, but the incidence of the sinusitis and pain syndrome has not been established.
Plan

The treatment is similar to that for sphenopalatine ganglion neuralgia. Medical and surgical treatment of sphenoid sinus disease seems to be an effective method of controlling the pain in some patients.

Vascular Headaches

Classic Migraine

Subjective Complaints

There is often a family history of migraine. The migraine attack is always preceded by an aura or prodromal symptom of a visual or an auditory nature. Childhood complaints of carsickness and "bilious" spells are often harbingers of migraine attacks later in life. The attacks may begin with the first important life change. Stress situations, such as leaving home to enter the Armed Services or beginning the first job, are often associated with the onset of attacks. There may be an increased number of attacks during the first few months of pregnancy, and they generally tend to increase during stressful periods. The headaches decrease during periods of calm and with advancing age.

Objective Findings

The patients usually look very ill, with a face that is pale and covered with sweat. They support the head with the hands to reduce movements that accentuate the pain. Flushing of the face, distention of the superficial temple artery, and congestion of the conjunctivae or the nasal mucous membrane are common.

Assessment

Physical examination, laboratory studies, x-rays, and electroencephalograms are usually normal.

Plan

The treatment of both classic and common migraine headache is designed to reduce the frequency and severity of the attacks and to relieve the pain of the acute attack. Interval treatment or prophylaxis can be accomplished with methysergide maleate. This is a serotonin antagonist and a useful agent for the interval treatment of migraine. This substance does not produce overt vasoconstriction. Because of its possible adverse effects, including retroperitoneal fibrosis, this drug should be considered only for those patients who have one or more severe attacks per week and those individuals who have uncontrollably severe attacks. Cyproheptadine hydrochloride has been used as a prophylactic agent against migraine. This potent serotonin and histamine antagonist has not proved significantly superior to other agents. Pizotyline, a tricyclic derivative, has an action similar to that of cyproheptadine hydrochloride. It has not proved to be more effective than methysergide maleate.
**Common Migraine**

*Subjective Complaints*

The prodromes are vague and vary. These symptoms may precede the attack by several hours or even days. The headache usually starts when the patient awakens in the morning. The intensity increases over a span of several hours. Occasionally, a patient may be awakened from a sound sleep with a full-blown headache. There are various associated symptoms, such as vomiting, polyuria, chills, and prostration. The headache usually lasts most of the day or until the patient goes to sleep. The pain may continue for several days. The headache is usually unilateral and covers areas supplied by several sensory nerves. The headache is often associated with nasal congestion and rhinorrhea on the affected side. There is occasionally unilateral lacrimation and conjunctival congestion. These phenomena might suggest a diagnosis of sinus headache unless they are recognized as an integral part of the migraine attack. The patient may complain of photophobia, phonophobia, or both. Eighty percent of the patients have a family history of migraine. There may be a youthful history of carsickness and "bilious" attacks. Life stresses, such as puberty, school work, job responsibilities, marriage, and child-rearing, often bring on migraine episodes. During pregnancy, there is relief in about 80% of patients. There may be temporary remissions during a *bona fide* illness, such as coronary thrombosis, pneumonia, jaundice, cholecystectomy, hysterectomy, prolonged orthopedic operations, or other debilitating ailments which serve to convince the patient that he is "a legal invalid" for a short period of time. A long vacation or leisurely travel often provides relief from the attacks. Menopause may be a time of accentuation of the attacks, and the postmenopausal phase may be one of either relief or continuation of the attacks. Arterial hypertension may increase both the frequency and severity of the migraine headache.

*Objective Findings*

There are no specific clinical findings associated with this disease.

*Assessment*

Laboratory x-rays and other diagnostic studies are usually normal.

*Plan*

The treatment for this form of migraine is essentially the same as that described for classic migraine.

**Cluster Headaches**

*Subjective Complaints*

A short period (5 minutes) of burning pain in the temple or eyes followed by a rapidly increasing and excruciating steady or throbbing pain is described by most patients. The pain may radiate into the neck. The attacks often arise with clock-like regularity during sleep or after relaxation or naps. The pain lasts from a few minutes to a few hours (30-90 minutes).
and rarely more than 2 hours. The attacks are precipitated by alcohol, nitrates, or histamine. Increased salivation, nasal airway congestion, and rhinorrhea are common. The headaches often follow periods of prolonged strain, overwork, and emotional stress.

**Objective Findings**

An ipsilateral prominence of the temporal blood vessels, conjunctival injection, lacrimation, miosis, edema, unilateral sweating, and engorgement of the turbinates are present. There are no neurologic abnormalities. Peptic ulcers and ulcer symptoms are common in patients with cluster headache.

**Assessment**

Laboratory, x-rays, and other studies are normal.

**Plan**

Antihistamines, analgesics, narcotics, sedatives, and tranquilizers are ineffective in relieving cluster headaches. Ergotamine preparations are quite effective in aborting or alleviating the attack. The oral administration of 1-2 mg of ergotamine tartrate an hour or so before the anticipated attack is useful when the attacks recur at consistent times of the day. Ergotamine tartrate, 1-2 mg, before retiring will prevent attacks that awaken the patient during sleep. The usual range of dosage of ergotamine tartrate is 1-4 or 1-5 mg per day. The patient should be carefully observed and cautioned about the early signs and symptoms of ergotism. These include pallor, numbness, tingling, or cyanosis of the digits.

Methysergide has been used with some success as a prophylactic for cluster headache. The usual dose is 2 mg, three times daily. It can be used for 6-8 weeks and then gradually tapered, reduced, and discontinued.

Those patients who become refractory to ergotamine tartrate and methysergide may respond to diazepam (Valium), corticosteroids, diphenylhydantoin (Dilantin) or cyancobalamine (vitamin B₁₂).

Psychotherapy should always be considered in patients with cluster headache.

**Muscle Contraction Headache (Tension)**

**Subjective Complaints**

The pain is located in the frontal, parietal, occipital, or temporal areas. This is a steady, nonpulsatile pain that may be either unilateral or bilateral. A tight "bandlike" or "viselike" sensation is usually described. The headache is precipitated by brushing or combing the hair and wearing a hat. Support of the head with the hands may relieve the pain. The patients usually purposely limit the range of head movement. Dizziness, tinnitus, and increased lacrimation may accompany the pain. Tension, anxiety, or specific stressful situations may precipitate the pain. Irritability, restlessness, and sleep disturbances are common in these patients.
**Objective Findings**

There may be signs of muscle contraction. Tenderness of the neck and scalp may be demonstrated by gentle palpation. No other specific abnormalities are present.

**Assessment**

X-ray examination of the skull and neck are usually normal. Some patients may demonstrate degenerative changes in the cervical spine.

**Plan**

Muscle relaxants, mild sedatives, analgesics, and physical therapy are useful. Psychotherapy should be considered if the individual patient warrants it.