Recognition and Management of Headache

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SOMMAIRE

La douleur de tous genres demeure un fardeau substantiel pour la société, en raison des coûts élevés qui y sont associés en termes de soins de santé et de baisse de la productivité. Les patients dentaires peuvent souffrir d'une douleur faciale (souvent définie subjectivement comme une douleur sous la ligne aile du nez-tragus) associée à des maux de tête (subjectivement définis comme la douleur ressentie au-dessus de cette même ligne) mais, dans les 2 cas, ces affections sont souvent mal diagnostiquées et traitées. Les personnes qui souffrent de douleur persistante pendant plus de 3 à 6 mois (douleur chronique) peuvent ressentir de multiples types de douleurs dans la région de la tête et du cou, y compris des maux de tête, des douleurs faciales ou même une douleur dans toute la tête (à partir du cou). De plus, certaines douleurs ne se limitent pas à des zones anatomiques strictes et peuvent irradier dans des zones adjacentes, ce qui complique le diagnostic. Une meilleure compréhension et appréciation des maux de tête et de la douleur faciale pourrait améliorer l'issue et le traitement global. Cet article passe en revue les troubles fréquemment accompagnés de maux de tête, qui devraient être considérés dans le diagnostic différentiel de la douleur traitée en cabinet dentaire.

Mots clés MeSH : diagnosis, differential; facial neuralgia/diagnosis; headache/diagnosis; headache/therapy

Cet article a été révisé par des pairs.

The International Headache Society uses a variety of diagnostic criteria to differentiate between the various presentations of headache. These head pains are often arbitrarily divided into pain above the ala-tragus line (referred to as headaches by patients and clinicians) and those below the ala-tragus line (referred to as facial pain). Patients may present with multiple categories or types of pain. Epidemiologic studies show that rates of pain in the temporomandibular region range from 3% to 15%.[1] In the United States, 6% of men and 18% of women experience one migraine headache annually.[2] Because of the common occurrence of headache and pain in the temporomandibular region, the close anatomic proximity of these 2 areas and their potential relation to orofacial pain, dental providers may frequently encounter patients with these types of pain.

Chronic pain, defined as pain lasting longer than 3–6 months, is often poorly managed and is considered a public health problem.[3] Rasmussen and others[4] reported that 12% of people with tension-type headaches were absent from work at least once over a 1-year period because of headache. Studies on work loss have estimated that 19% of those with headache missed work and 22% reported reduced effectiveness while working.[5] In another study, conducted over a 3-month period, individuals with migraine missed approximately 1.1 days per month and their effectiveness on workdays was reduced by an average of 41% because of migraine.[6] Conservative estimates of treatment costs for migraine in the United States are over $1 billion annually.[7]

Because of the impact of pain in society, the Joint Commission on Accreditation of

Healthcare Organizations (US) recently developed standards to ensure the appropriate assessment and management of pain.[8] The Canadian Pain Society has developed a pain care bill of rights to increase awareness of the importance of pain management (see www.canadianpainsociety.ca/patient_pain.html).

The International Association for the Study of Pain has developed postgraduate and postdoctoral curricula related to pain for the education of dental professionals.[9]

Temporomandibular disorders are a common cause of orofacial pain and can coexist with headache presenting in the temporal and frontal region. Cervical pain can be a source of both facial pain and headache. Myofascial pain can be associated with broader pain complaints including tension-type headaches, and both joint and muscle problems may refer pain to the ears. Various types of neurovascular pain can present in the face and may be associated with broader neurovascular pain including migraine headaches. Because of this overlap in pain problems and anatomic boundaries, it is important for dental providers to be aware of various forms of headache, including facial pain.

Orofacial pain and oral medicine clinicians are familiar with the various forms of headache and can assist in diagnosis and treatment for many patients with combined facial pain and headaches. This report briefly reviews the classification of headache and outlines current concepts of management. The description of each category is followed by an illustrative case example.

Tension-Type Headache

In its classification of headache disorders, the International Headache Society defines tension-type headache as a headache lasting 30 minutes to 7 days. The pain is usually reported as pressure or a tight sensation of mild to moderate intensity, typically on both sides of the head or around the head in a "band-like" distribution. There tend to be no other symptoms associated with the headache, and there is no exacerbation of pain with physical activity. Tension-type headaches occurring at a frequency of less than 15 episodes or days per month are classified as episodic, whereas those occurring at a frequency of 15 episodes (days) or more per month are classified as chronic.[10]

Tension-type headache is the most common type of headache and has the highest economic cost but is the least studied. Tension-type headaches are more common in females and occur at any age, but typically between the ages of 20 and 40 years.[11] There may be a family history of headache. The site of the headache is usually the forehead, temples, back of the head or neck.[12,13]

Management strategies include conservative, nonpharmacologic modalities such as relaxation therapy, positive imagery, sleep regulation, stress management and counselling, as well as over-the-counter analgesics.

Vignette

A patient presenting to the dental office describes a bilateral headache in the temples occurring several times a week. The headaches are characterized by a dull aching pain that often presents as a band around the head. Although the headaches tend to resolve without medications, ibuprofen or acetaminophen is used occasionally to relieve the pain. The patient associates headaches with lack of sleep and missed meals; when a headache is present, eating chewy foods increases the pain. The patient reports that the headaches have a low impact on daily life and are associated with a low level of disability.

Migraine

Migraine is typically described as a unilateral headache associated with pulsating pain of moderate to severe intensity. It is aggravated by physical activity and may be associated with nausea or vomiting and/or sensitivity to light and sound. The International Headache Society defines migraine as an "idiopathic, recurring headache disorder manifesting as attacks lasting 4–72 hours."[10] In migraine with aura, formerly called classic migraine, the diagnostic feature is a complex of "warning" or prodromal symptoms (the aura), which gradually develop over 5 to 20 minutes and usually last less than 60 minutes; these symptoms include scotomata (blind spots), teichopsia (fortification spectra), photopsia (flashing lights) and visual or auditory hallucinations.[10]

Most people with migraine have a family history of the disorder, which affects primarily women. Onset commonly occurs in adolescence or the third decade, and the headaches tend to diminish in the fifth and sixth decades.[2] Headache triggers can include stress; fatigue, lack of sleep or excess sleep; fasting or missed meals; vasoactive substances in certain foods and food additives such as nuts, certain cheeses, caffeine and alcohol; menses; and changes in barometric pressure or altitude. Medications that can precipitate migraine include reserpine, nitrates, indomethacin, oral contraceptives and postmenopausal hormones.

The neurovascular pain of migraine may present in a facial distribution, in which case it may be confused with odontogenic pain or pain related to either masticatory muscle myalgia or temporomandibular joint arthralgia. Various headache assessment questionnaires, such as the Migraine Disability Assessment (MIDAS) Questionnaire (see www.midas-migraine.net/About_Midas/default.asp) and the Headache Impact Test (HIT; see www.headachetest.com), have been shown to improve communication between patient and clinician, allowing accurate assessment of severity, individualization of treatment plans and monitoring of outcome measures.

Prevention involves recognition of factors leading to onset and avoidance of foods with vasoactive substances.

Over-the-counter analgesics and nonsteroidal anti-inflammatory drugs (NSAIDs) often constitute the first-line treatment. Mixed analgesics containing barbiturates or opioid preparations are also used frequently. At present, abortive migraine medications such as triptans (available in oral tablet, nasal spray and intramuscular formulations) are the most effective agents for symptomatic treatment.[14] Preventive or prophylactic treatment includes medications taken daily to decrease the severity and frequency of the headache attack. These medications include β-blockers, calcium channel blockers, antidepressants (tricyclics), anticonvulsants, ergot derivatives and NSAIDs.[15] Injections of botulinum toxin may be of benefit in the management of migraine pain.[16]

Vignette

A female patient describes recurrent right-sided headache in the temple and mid-face that makes working difficult and that frequently causes her to miss work. On further questioning, she reveals that there is an associated sensation of nausea and a preference to lie down with the curtains closed. The headaches last several hours or even for the remainder of the day and tend to resolve after sleeping. Others in the family report similar headaches. Over-the-counter analgesics have not been successful. She is asked to track headache triggers with a headache diary, to identify potential dietary changes, and to note whether medications are effective. This information can then be reviewed at the next follow-up visit.

Cluster Headache

The International Headache Society defines cluster headache as "attacks of severe, strictly unilateral pain, [in a] orbital, supraorbital and/or temporal location, lasting 15–180 minutes and occurring from once every other day to 8 times per day."[10]

Episodic cluster headaches consist of headaches occurring with a periodicity of 7 days to 1 year, separated by pain-free periods of 14 days or more. Chronic cluster headache consists of attacks lasting more than 1 year without remission or remission less than 14 days. The associated symptoms include at least one of the following: conjunctival injection, lacrimation, nasal congestion, rhinorrhea, eyelid edema, forehead and facial sweating, miosis or ptosis on the ipsilateral side, and sense of restlessness or agitation.[17]

The pain of cluster headache is noted for its severity. It is often described as throbbing, pulsating, severe or constant, with sharp stabbing or knife-like pains into the eye. Those affected desire to be upright and moving during an attack, in contrast to migraineurs, who prefer rest and quiet.[18]

The name is derived from the clustering of headaches in specific periods, often in the spring and the fall. During a cluster period, alcohol can trigger an attack. Patients often wake at night because of cluster headaches. Unlike migraine, cluster headache is a primarily male disorder with onset usually occurring between the ages of 20 and 40 years. Because of the throbbing or pulsating quality and its ability to awaken the individual at night, cluster headache is often confused with odontogenic pain.

Treatment may include oxygen by inhalation, dihydroergotamine, triptans, sphenopalatine blockade, intranasal lidocaine or capsaicin, indomethacin or opioids. Preventive (prophylactic) treatment includes calcium channel blockers, steroids, lithium, ergotamine derivatives, divalproex sodium, neuroloeptics and occasionally opioids.[19]

Vignette

A 36-year-old man presents with temporomandibular joint pain of several years' duration. He reports a tooth-grinding habit and nightly use of an oral appliance. He describes severe pain on the side of his face, along with tearing and redness of the eye. He states that the pain tends to awaken him at night; he is restless at night and finds himself getting up and pacing because of the pain. He associates the pain with autumn and spring. A therapeutic trial with triptans taken at the onset of pain alleviates the pain. A trial with calcium channel blocker during the anticipated seasonal change is helpful in decreasing headache frequency and intensity.

Hypnic Headache

Hypnic headache is a rare headache occurring in both men and women after age 60 years. The headaches are generally characterized by bilateral, throbbing pain and occur 2 to 4 hours after onset of sleep. The pain is usually short-lived, lasting 15 minutes to 3 hours. There tends to be an absence of autonomic features.[10] The similarities to cluster headache have suggested a relationship between the 2 types, but thus far none has been proven. The nocturnal association and possible disturbances in the biological clock have implicated serotonin in this particular headache as well in other headache types.[20] The pain often resolves with lithium, caffeine or indomethacin.[21]

Vignette

A 66-year-old woman reports severe right- and left-sided headache that often occurs at about 1:00 AM, about 2 hours after her typical bedtime (approximately 11 PM). She denies any associated features, such as nausea, vomiting or sensitivity to light or sound. Espresso before sleeping alleviates the pain.

Short-lasting Unilateral Neuralgiform Headaches

Short-lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT) is distinguished by the short duration of attack (5 to 240 seconds)

and the frequency of occurrence (3 to 200 times per day).[10] Short-lasting unilateral neuralgiform headache with cranial autonomic symptoms (SUNA) has been proposed as a broader category of pain, lasting 2 seconds to 10 minutes, occurring in the unilateral orbital, supraorbital or temporal area and having a stabbing or pulsating quality. SUNA is accompanied by one of the following: conjunctival injection or lacrimation, nasal congestion or rhinorrhea, or eyelid edema. There is currently no effective treatment for SUNCT or SUNA.[22,23]

Vignette

A patient describes a sharp, stabbing pain in the temple and eye that lasts several seconds and occurs repeatedly (several hundred times) every day. The spouse describes an altered appearance to the eye on the side of the pain. Trials with various medications including indomethacin have not affected the pain. The patient may require ongoing pain management strategies to best control the severeity of pain.

Chronic Paroxysmal Hemicrania

The International Headache Society defines chronic paroxysmal hemicrania as "frequent, short-lasting attacks of unilateral pain, usually in the orbital, supraorbital or temporal region that last from 2–45 minutes."[10] Characteristic frequency is 5 or more attacks per day (range 1 to 40).[10] Chronic paroxysmal hemicrania tends to be more common among women than men, and onset occurs in the third decade.

The pain is associated with autonomic symptoms such as conjunctival injection, lacrimation, nasal congestion, rhinorrhea, ptosis or eyelid edema. The pain is usually unilateral over the ophthalmic distribution of the trigeminal nerve but has been reported in the occipital region. The pain is excruciating and may be throbbing. People with chronic paroxysmal hemicrania tend to be still and quiet. Episodic paroxysmal hemicrania is responsive to indomethacin. However, gastrointestinal protection may be required if the patient undertakes long-term therapy.[23]

Vignette

A 25-year-old woman describes a throbbing and intense pain around the left eye and temple that occurs a dozen times per day and lasts approximately 30 minutes. The pain is disabling, and the patient reports remaining still during the episodes of pain. She reports left nasal congestion, but the results of an examination by her ear, nose and throat specialist were normal. Past medication trials have included over-the-counter analgesics as well as triptans. Indomethacin relieves the pain, although the medication aggravates associated gastrointestinal complaints.

Discussion

Although each of these forms of headache may occur alone, they may be part of a more complex pattern, including facial pain, that may produce a puzzling combination of pain complaints and that may increase the complexity of management. In addition, neurovascular pain may present as facial symptoms, complicating the diagnosis. Myalgia may contribute to a continuum of pain that can progress to neurovascular pain, and mixed headache is common. Temporomandibular joint disorders may coexist with headache. Thorough diagnosis will allow selection of specific treatment(s) and prophylactic management addressing the various components of the patient's pain, allowing improved management. Management of such pain conditions usually requires use of centrally acting medications and may include counselling.

Toothache is possibly the most common form of headache. Treatment of patients with nonodontogenic headache requires recognition of contributing conditions as well as knowledge of medical management of these complex pain conditions, most of which is nonsurgical. Familiarity with common forms of headache and nondental facial pain is essential for initial triage and referral. Orofacial pain may contribute to a headache problem, and as a result some type of team management involving both dentists and physicians may be necessary to resolve certain types of headache or orofacial pain. People with pain lasting 6 months or longer may experience multiple pain complaints with multiple causes. Pain occurring without obvious signs of oral or facial abnormalities may require further investigation. Because of the complex nature of diagnosis and medical management of nonodontogenic headache, referral to experienced clinicians is often appropriate.

Historically, there has been no single recognized specialty with adequate training to recognize, treat and manage complex head and neck pain. Pain research in dentistry has involved many specialists, including oral and maxillofacial surgeons, orthodontists, periodontists and endodontists. Clinicians specifically trained in orofacial pain may be best able to assist in the overall management of these patients. Future basic research, clinical trials and improvements to diagnostic categories are needed to advance pain management.

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