

CLUSTER HEADACHE

Cluster headache refers to the characteristic grouping or clustering of attacks. Cluster headaches may also be known as histamine headache, red migraine, Horton's headache, and cephalalgia or sphenopalatine neuralgia. The headache periods can last several weeks or months, and then disappear completely for months or years leaving considerable amounts of pain-free intervals between series. Cluster is one of the least common types of headache, and the cause is unknown. Cluster headaches occur more often in men than women. The pain is vascular in nature, and caused by blood vessel swelling in the head. The autonomic nervous system is intimately involved in the genesis of cluster headache and it appears to be mediated by alterations in the hypothalamic area. This area and adjacent areas are believed to regulate both daily as well as yearly cycles that go on in the body. Although it is rare, it is possible for someone with cluster headache to also suffer from migraine headache.

Cluster headache starts suddenly, and a minimal warning of the oncoming headache may occur, including a feeling of discomfort or a mild one-sided burning sensation. This pain is of short duration, generally 30 to 45 minutes. However, the headache itself may last anywhere from a few minutes to several hours and will disappear only to recur later that day. Most sufferers get one to four headaches per day during a cluster period. They occur regularly, generally at the same time each day. Cluster headaches often awaken the sufferer in the early morning or during the night and have been called "alarm clock headaches."

Typical cluster headache characteristics include:

- pain almost always one-sided
- pain remains on the same side during a series
- pain can occur on the opposite side when a new series starts
- pain is localized behind the eye or in the eye region and may radiate to the forehead, temple, nose, cheek or upper gum on the affected side
- the affected eyelid may become swollen or droop and the pupil may contract
- the nostril on the affected side of the head is often congested
- nasal discharge and tearing of the eye is on the same side as the pain
- excessive sweating
- face may become flushed on the affected side

Cluster headaches are not associated with the gastrointestinal disturbances or sensitivity to light that is found in migraine.

The pain of cluster headache is generally intense and severe and often described as a burning or piercing sensation. It may be throbbing or constant, the scalp may be tender and the arteries often can be felt increasing their pulsation. The pain is so intense that most sufferers cannot sit still and will often pace during an acute attack. The cluster headache sufferer has a considerable amount of pain-free intervals between series. Sufferers are generally affected in the spring or autumn, and, due to their seasonal nature, cluster headaches are often mistakenly associated with allergies or business stress. The seasonal relationship is individual for each sufferer.

Substances that cause blood vessel swelling can provoke an acute attack during a series period. Nitroglycerin or histamine, smoking or minimal amounts of alcohol can precipitate or increase the severity of the attacks as the sufferer's blood vessels seem to change and become susceptible to the action of these substances. The blood vessels are not sensitive to these substances during headache-free periods. Hormonal influences in women do not appear to be a factor in cluster headaches.

Some patients will note that the series of headaches is continuous, not separated by periods of remission. About 20% of cluster sufferers' attacks are chronic, occurring throughout the year, thus making the control of these headaches more difficult. These chronic cluster headaches differ from episodic cluster headaches as the periods are continuous, and the patients do not respond to conventional forms of cluster therapy.

Treatment

The patient with episodic cluster headaches should be started on prophylactic therapy as early as possible in the series in order to curtail the length of the cluster period and decrease the severity of the headaches. Cluster prophylaxis can involve several medications. Commonly used choices include corticosteroids, verapamil (a calcium channel blocking agent) and antiepileptic drugs such as divalproex sodium and topiramate. These agents are slowly tapered off and then discontinued as the headaches decrease and disappear. For patients with chronic cluster headaches, agents such as lithium or calcium channel blockers may be employed. Histamine desensitization and surgical intervention may be considered for chronic cluster headache patients who have not responded to other forms of standard therapy.

Because of the brief duration of an acute cluster attack, the abortive treatment of these headaches is difficult. Often, the acute headache has disappeared before the patient arrives at the emergency department or physician's office to receive treatment. Oxygen inhalation by facial mask can be used at the first signs of a cluster attack and has been successful in aborting an acute cluster headache. The cluster patient may respond to ergotamine preparations, if used immediately at onset of symptoms. Some patients have gained some relief with the use of intranasal applications of a local anesthetic agent, such as lidocaine. Sumatriptan (Imitrex®), a 5 HT agonist, is indicated for the abortive therapy of cluster headaches. It is available in injectable, nasal spray and tablet forms, although the latter is the least effective because of the time it takes before the onset of action. Any of these treatments should be used under the direction of a physician familiar with cluster headache therapy. The injectable form of sumatriptan (self-administered) is FDA approved for the acute treatment of cluster headache.