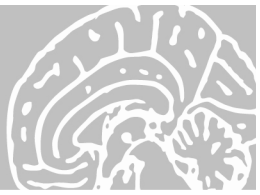
Cluster Headache



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Cluster headache is the most common TAC (Trigeminal Autonomic Cephalgia) occurring in fewer than 0.1% of most populations, 2-4 times more commonly in men. The most common type is episodic cluster, which presents in cluster periods lasting 4-8 weeks on average, whereas the chronic form has no remission for more than a month per year and continues for many years. About 20% of cluster patients have the chronic form which is often harder to treat. In a cluster cycle, patients have about 1-3 attacks per day, one beginning often 90 minutes after sleep onset, coexistent with the start of the first REM cycle.

For many years it has been thought that the hypothalamus was abnormal in cluster as there is a circadian and circannual periodicity to the attacks. May and Goadsby demonstrated an abnormality in the posterior hypothalamus on PET scanning over 10 years ago and that was followed by effective deep brain stimulation into that area by Bussone, Leone and Franzini in Milan. CGRP and VIP are released during cluster and there is an increase in parasympathetic and a decrease in sympathetic activity.

The diagnosis is made in patients who have excruciating pain in and around one eye lasting for about 60 minutes, with ipsilateral cranial autonomic symptoms, and or agitation, and /or a fullness in one ear. The pain can also be felt in the second division of V or at the back of the head. Cluster must be differentiated from other TACS, including the paroxysmal hemicranias and SUNCT and SUNA, usually by length of the attack and response to medications.

There are many acute care treatments for cluster, but the most commonly used are either breathing 100% oxygen via mask at a rate of 7-15 Liters per minute for 15 minutes or taking an injection of sumatriptan 6 mg. The best preventive agent out of many is verapamil, often at 160 mg tid dose or higher. One must be cautious about heart block, fluid retention and constipation.

The differential diagnosis for chronic cluster must include other primary headache disorders with autonomic features, such as chronic migraine and other TACs. In addition, various secondary headache conditions can mimic symptoms of chronic CH, especially lesions in the parasellar area or dissection of a cervical artery. Appropriate evaluation should always be done.

CCH can be differentiated from chronic migraine by the unilateral pain which does not switch sides and ipsilateral nature of its accompanying autonomic symptoms and especially by its timing (short duration and frequent episodes daily). In comparison, migraine patients are much more likely to describe bilateral lacrimation, conjunctival injection, periorbital edema, ptosis, and rhinorrhea, although unilateral symptoms can occur. Migraineurs also have a much longer duration of attacks (greater than 4 hours except for children) with more associated symptoms such as nausea, photo- and phonophobia and worsening with exertion.

Cluster headache may be the most severe type of headache we know, which fortunately is often effectively treated.