

Cluster headache

(British Association for the Study of Headache, October 2007)

How do I diagnose it?

Although clinical features often overlap with migraine, the shorter duration and severe intensity of pain and the behaviour during an attack are the two most important indicators.

- Pain is periorbital and unilateral. Nausea, vomiting, photophobia or phonophobia are usually absent.
- Patients pace the room, restless and agitated. Migraine sufferers want to rest quietly.
- An attack occurs without warning, lasts 15-180 minutes and can occur 1- 8 times a day with pain free intervals. Migraine lasts 4-72 hours.
- Autonomic features around the eye on side of pain. Lacrimation and conjunctival injection are the most common signs but patients also experience nasal stuffiness or rhinorrhoea. Horner's Syndrome, forehead sweating, facial flushing and oedema are less common.

What types of cluster headache are there?

- Episodic cluster headache – periods of frequent cluster attacks separated by pain free periods of one month or more. The average cluster period lasts between 6 and 12 weeks and occurs twice a year, often at the same time of year.
- Chronic cluster headache (10% of patients) - periods of remission last less than one month.

What else could it be?

Migraine, temporal arteritis (check ESR), trigeminal neuralgia, sinusitis and glaucoma. In rare cases dissection of cerebral blood vessels, intracranial aneurysms and space occupying lesions can present with cluster pain. Other much rarer autonomic cephalalgias are paroxysmal hemicrania and SUNCT (Short acting unilateral neuralgia form headaches with conjunctival injection and tearing.)

Should cluster headache be investigated?

It is good practice to image all new cases with MRI. This can be relaxed for presentations where stable cluster headache has been experienced for some time in the absence of clinical signs or unusual features.

How do I treat it?

Acute treatment for episodic cluster headache attacks

- Subcutaneous Sumatriptan 6mg is the treatment of choice. A maximum of two attacks in 24 hours can be treated. There appears to be no long-term side effects of repeated injection and drug tolerance does not occur.
- Nasal Sumatriptan (20mg) or Zolmitriptan (5mg) are alternatives. Oral Triptans are usually ineffective.
- Corticosteroids (Prednisolone) (1mg per kilogram maximum 60mg reducing over 4-6 weeks) are useful for established cluster periods occurring two to three times a year, particularly if they are relatively short. Alternatively they can be used to treat the headache while waiting for preventive drugs to become effective.
- Oxygen is a safe, effective and evidence based treatment for cluster. Since recent changes in oxygen ordering and delivery, 100% is now available on prescription using a Home Oxygen Order Form (HOOF). The inhalation should begin with the first 15 minutes and > 60% of attacks can be alleviated within 7 minutes. To obtain the required concentration 12L/min is required using a non-rebreathing mask. When completing the Home Oxygen Order Form (HOOF): enter under Short Burst Oxygen (box 9); flow rate 12 l/min; 2 hours per day; 100% mask type; (box 13) state in bold **"FOR CLUSTER HEADACHE"**. If the patient also requires portable cylinders in case of an attack away from home enter the same prescription details under Ambulatory oxygen (box 8). BOC can provide assistance (24/7) by calling their helpline on **0800 136 603**.

For Home Oxygen Order Form visit:

<http://www.primarycarecontracting.nhs.uk/uploads/HOS/December%20Uploads/DH%20APPROVED%20HOOF.pdf>

Stationary package:

2400 litre cylinder (eg. BOC's 'ZH' cylinder) complete with a non-rebreathing mask (eg. SALTER LABS 8140) and tubing.



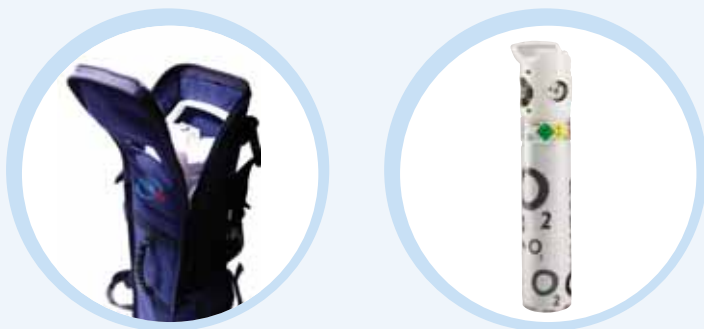
- Weight (full): 14.9kg
- Flow rate: 1-15 l/min
- Gas capacity: 2400 litres

Duration:

- At 7l/min: 5.5 hours
- At 12 l/min: 3.3 hours
- At 15 l/min: 2.5 hours

Portable package:

460 litre cylinder (eg. BOC's 'CD' Cylinder) complete with a non-rebreathing mask (eg. SALTER LABS 8140) and tubing.



- Weight (full): 3.2kg
- Flow rate: 1-15 l/min
- Gas capacity: 460 litres

Duration:

- At 7l/min: 1 hour
- At 12 l/min: 35 minutes
- At 15 l/min: 30 minutes

Preventive treatment for chronic cluster headache

- Consultant referral may be indicated for managing chronic cluster.
- Verapamil is the drug of choice. The starting dose is 80mg tds increasing in 80mg increments every two weeks until control is obtained or to a maximum of 960mg a day. ECGs should be performed before each increment increase to exclude AV node conduction problems and every six months with long-term high dose usage.
- Lithium carbonate is effective and can be used in addition to Verapamil. Blood levels should be monitored between 0.4 and 0.8 mml per litre. Other drugs used but of unproven efficacy are topiramate, sodium valproate, and gabapentin. Surgery can be considered in treatment resistant cases.

1. Headache Classification Committee of The International Headache Society, *The International Classification of Headache Disorders* (second edition). Cephalgia, 2004. **24**(Suppl 1): p. 1-160.
2. Goadsby, P.J., A.S. Cohen, and M.S. Matharu, *Trigeminal autonomic cephalalgias – diagnosis and treatment*. Current Neurology and Neuroscience Reports, 2007. **7**: p. 117 – 125.
3. Cohen, A.S., M.S. Matharu, and P.J. Goadsby, *Electrocardiographic abnormalities in patients with cluster headache on verapamil therapy*. Neurology, 2007. **69**: p. 668 – 675.

