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NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE
Proposed Health Technology Appraisal

Galcanezumab for preventing cluster headache

Draft scope (pre-referral)

Draft remit

To appraise the clinical and cost effectiveness of galcanezumab within its marketing authorisation for preventing cluster headache.

Background

Cluster headache is included in a group of conditions called trigeminal autonomic cephalalgias with the attacks resulting from vascular changes in the circulation in the head[1]. Cluster headaches are characterised by episodes of unilateral periorbital pain, conjunctival injection, lacrimation and rhinorrhoea. Factors that can trigger attacks include: subcutaneous injection of histamine, stress, allergens, seasonal changes, nitro-glycerine and alcohol[2]. Cluster headache can be life-long with recurrent attacks[2].

Cluster headache may be episodic or chronic and they can sometimes change between the two different types[2]:

- Episodic cluster headache attack periods may last from 7 days to 1 year, separated by month long pain-free intervals[1]. Episodic headaches may recur predictably during certain times of the year.

- Chronic cluster headache attack periods are recurrent for more than 1 year and headaches can be separated by headache-free periods of less than 1 month, or not separated at all[1].

Cluster headache is a rare condition. The 1-year prevalence of cluster headache is estimated at 5 per 10,000[3], approximating 27,400 people. Around 85 to 90%[1] of people with cluster headache (between 23,300 and 24,600 people in England per year) have episodic cluster headache. The remaining 10 to 15%[1] of people (approximately 2,700 to 4,100 people in England per year) have chronic cluster headache. In 2015, there were 1,720 admissions for cluster headache in England, resulting in 1,465 bed days and 1,537 finished consultant episodes[4].

There are 2 broad approaches to managing cluster headache: acute treatments and preventive (or prophylactic) treatments. NICE clinical guideline 150 recommends verapamil as an option for prophylactic treatment during a bout of cluster headache and to seek specialist advice for cluster headache that does not respond to verapamil. Verapamil does not currently have a marketing authorisation in the UK for this indication. Other pharmacological treatment options may include pizotifen which has a marketing authorisation

in the UK for the prophylactic treatment of recurrent cluster headache. Invasive treatments are reserved for patients with distressing symptoms that are refractory to medical treatments. They include deep brain stimulation to modulate central processing of pain signals, radiofrequency ablation to interrupt trigeminal sensory or autonomic pathways and implantation of a sphenopalatine ganglion stimulation device.

The technology

Galcanezumab (brand name unknown, Eli Lilly and Company) is a humanised monoclonal antibody. It inhibits the action of calcitonin gene related peptide, which is believed to transmit signals that can cause severe pain. It is administered by subcutaneous injection.

Galcanezumab does not currently have a marketing authorisation in the UK for cluster headache. It has been studied in clinical trials compared with placebo in adults with chronic cluster headache and in clinical trials compared with placebo in adults with episodic cluster headache.

Intervention(s)	Galcanezumab
Population(s)	Adults with cluster headache
Comparators	• Established clinical management for preventing cluster headache without galcanezumab (including, but not limited to verapamil [does not have a marketing authorisation for this indication])
Outcomes	The outcome measures to be considered include: • frequency of headache days per month • severity of headache • number of cumulative hours of headache or headache days • reduction in acute pharmacological medication • adverse effects of treatment • health-related quality of life.
Economic analysis	The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year. The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared. Costs will be considered from an NHS and Personal Social Services perspective.

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Other considerations	If the evidence allows, the following subgroups will be considered: • subgroups defined by type of cluster headache, specifically chronic cluster headache and episodic cluster headache • subgroups defined by the number of previous prophylactic treatments. Guidance will only be issued in accordance with the marketing authorisation. Where the wording of the therapeutic indication does not include specific treatment combinations, guidance will be issued only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator.
Related NICE recommendations and NICE Pathways	Related Technology Appraisals: Botulinum toxin type A for the prevention of headaches in adults with chronic migraine (2012). NICE Technology Appraisal 260. Static guidance list. Appraisals in development (including suspended appraisals): Erenumab for preventing migraine. NICE technology appraisals guidance ID1188. Publication date to be confirmed. Related Guidelines: Headaches in over 12s: diagnosis and management (2012). NICE guideline 150. Recommendations up-dated November 2015. Related Interventional Procedures: Transcutaneous stimulation of the cervical branch of the vagus nerve for cluster headache and migraine (2016). NICE interventional procedures guidance 552. Implantation of a sphenopalatine ganglion stimulation device for chronic cluster headache (2015). NICE interventional procedures guidance 527. Deep brain stimulation for intractable trigeminal autonomic cephalalgias (2011). NICE interventional procedures guidance 381.

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	Related Quality Standards: Headaches in over 12s (2013). NICE quality standard 42. Related NICE Pathways: Headaches (2017) NICE pathway
Related National Policy	NHS England (July 2015) Occipital Nerve Stimulation for Adults with Intractable Chronic Migraines and Medically Refractory Chronic Cluster Headaches Clinical Commissioning Policy Reference D08/P/c NHS England (2013) NHS standard Contract for Specialised Pain Department of Health and Social Care, NHS Outcomes Framework 2016-2017 (published 2016): Domain 2.

Questions for consultation

Is the population defined appropriately? In particular, will galcanezumab be used for:

- chronic cluster headache only
- episodic cluster headache only
- both chronic and episodic cluster headache?

Which treatments are considered to be established clinical practice in the NHS for preventing cluster headache? In particular, is pizotifen used in clinical practice?

Are the outcomes listed appropriate?

Are the subgroups suggested in 'other considerations appropriate? Are there any other subgroups of people in whom galcanezumab is expected to be more clinically effective and cost effective or other groups that should be examined separately?

Where do you consider galcanezumab will fit into the existing NICE headaches pathway?

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others. Please let us know if you think that the proposed remit and scope may need changing in order to meet these aims. In particular, please tell us if the proposed remit and scope:

- could exclude from full consideration any people protected by the equality legislation who fall within the patient population for which galcanezumab will be licensed;

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- could lead to recommendations that have a different impact on people protected by the equality legislation than on the wider population, e.g. by making it more difficult in practice for a specific group to access the technology;

- could have any adverse impact on people with a particular disability or disabilities.

Please tell us what evidence should be obtained to enable the Committee to identify and consider such impacts.

Do you consider galcanezumab to be innovative in its potential to make a significant and substantial impact on health-related benefits and how it might improve the way that current need is met (is this a 'step-change' in the management of the condition)?

Do you consider that the use of galcanezumab can result in any potential significant and substantial health-related benefits that are unlikely to be included in the QALY calculation?

Please identify the nature of the data which you understand to be available to enable the Appraisal Committee to take account of these benefits.

To help NICE prioritise topics for additional adoption support, do you consider that there will be any barriers to adoption of this technology into practice? If yes, please describe briefly.

NICE intends to appraise this technology through its Single Technology Appraisal (STA) Process. We welcome comments on the appropriateness of appraising this topic through this process. (Information on the Institute's Technology Appraisal processes is available at http://www.nice.org.uk/article/pmg19/chapter/1-Introduction).

References

1. Silberstein SD, Mechtler LL, Kudrow DB et al. Non-Invasive vagus nerve stimulation for the acute treatment of cluster headache: findings from the randomized, double-blind, sham-controlled ACT1 Study. Headache 2016;56(8):1317-32.

2. Medscape. Blanda M. Cluster headache. Accessed 18 January 2017. Availabl from: http://emedicine.medscape.com/article/1142459-overview.

3. Fischera M, Marziniak M, Gralow I et al. The incidence and prevalence of cluster headache: a meta-analysis of population-based studies. Cephalalgia. 2008;28(6):614-18.

4. Health & Social Care Information Centre. Hospital episode statistics for England. Admitted patient care, 2015-16. www.hscic.gov.uk