NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Appraisal

Fluocinolone acetonide ocular implant for treating recurrent non-infectious uveitis

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of fluocinolone acetonide ocular implant within its marketing authorisation for treating recurrent non-infectious uveitis.

Background

Uveitis is inflammation of the uveal tract of the eye, which consists of the iris, the ciliary body and the choroid. Uveitis can be caused by a bacterial, viral or fungal infection or trauma to the eye, but it is more commonly associated with an underlying autoimmune disorder. The autoimmune disorder may be associated with systemic disease, such as ankylosing spondylitis, or it may affect only the eyes. One or both eyes may be affected. Symptoms of uveitis include eye pain and redness of the eye, problems with vision, sensitivity to light, temporary loss of peripheral vision and headaches. Uveitis may be acute (where the symptoms come in short episodes of about 6 weeks and may recur) or chronic (where the inflammation persists for more than 3 months possibly flaring up at times). Consequences of uveitis can include glaucoma (increased pressure inside the eye), cataracts (cloudiness of the lens), cystoid macular oedema (swelling of the retina) and permanent loss of peripheral or central vision.

Uveitis is classified according to the location of the inflammation. Anterior uveitis is inflammation of the iris. Intermediate uveitis affects the posterior part of the ciliary body and the vitreous humour. Posterior uveitis affects the choroid at the back of the eye, and often involves the retina. Posterior segment uveitis includes both intermediate and posterior uveitis. Pan uveitis is inflammation of the whole of the uveal tract (front and back). Intermediate, posterior and pan uveitis are less common than anterior uveitis (they account for around 1 in 4 uveitis diagnoses[1]).

It is estimated that non-infectious uveitis affects less than 4.8 people per 10,000 in the European Union[2]. It is estimated that up to 26,300 people are affected by non-infectious uveitis in England each year. Uveitis affects people of any age, but most commonly affects people between the ages of 20 and 59 years[3].

There is no nationally agreed treatment pathway for recurrent non-infectious uveitis. Non-infectious uveitis (whether or not it is associated with an underlying systemic autoimmune disorder) is initially treated with

corticosteroids. Corticosteroids may be administered systemically (orally or parenterally), by periocular or intravitreal injection, or using intravitreal implants. Additionally, if the front of the eye is also affected, topical corticosteroids and dilating eye drops may be offered. Systemic immunosuppressive drugs such as methotrexate, ciclosporin, mycophenolate mofetil and azathioprine may be offered. This may allow a reduction in the corticosteroid dose and associated complications (known as the steroid-sparing effect). Immunosuppressive drugs may also be given when corticosteroids are contraindicated or not tolerated. If there is an inadequate response to immunosuppressive treatments, or if they are not tolerated, biological tumour necrosis factor (TNF)-alpha inhibitors may be used. In rare cases, surgery (vitrectomy) may be needed to treat complications associated with recurrent or severe uveitis.

The technology

Fluocinolone acetonide ocular implant (Iluvien, Alimera Sciences) is an injectable, sustained-release non-bioerodible drug delivery system that is loaded with the corticosteroid fluocinolone acetonide. It is implanted into the eye.

Fluocinolone acetonide ocular implant does not currently have a marketing authorisation in the UK for treating uveitis. It has been compared with sham injection in clinical trials in adults with chronic (at least 1 year since diagnosis) recurrent (evidence of 2 recurrences in the 12 months preceding study entry) non-infectious posterior segment uveitis in one or both eyes with or without anterior uveitis, and with or without systemic corticosteroids or immunosuppressant at the time of study entry.

Intervention(s)	Fluocinolone acetonide ocular implant
Population(s)	Adults with recurrent non-infectious uveitis

Comparators	• Periocular or intravitreal corticosteroid injections • Intravitreal corticosteroid implants including dexamethasone intravitreal implant (in line with NICE technology appraisal 460) • Systemic corticosteroids • Systemic immunosuppressive therapies, including but not limited to, azathioprine, methotrexate, cyclophosphamide, ciclosporin, tacrolimus, mycophenolate mofetil (and mycophenolic acid) (with the exception of ciclosporin, none of the listed immunosuppressive therapies currently have a marketing authorisation in the UK for this indication) • TNF-alpha inhibitors including adalimumab (in line with NICE technology appraisal 460) • Best supportive care (when all other treatment options have been tried)
Outcomes	The outcome measures to be considered include: • recurrence of uveitis (the affected eyes) • visual acuity (the affected eyes) • visual acuity (both eyes) • need for further corticosteroid treatment • complications of uveitis • mortality • 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. If the technology is likely to provide similar or greater health benefits at similar or lower cost than technologies recommended in published NICE technology appraisal guidance for the same indication, a cost-comparison may be carried out. 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. Cost effectiveness analysis should include consideration of the benefit in the best and worst seeing eye. The availability of any patient access schemes for the intervention or comparator technologies will be taken into account. The availability and cost of biosimilars should be taken into consideration.
Other considerations	If evidence allows, consideration will be given to subgroups according to: • Type of uveitis (acute or chronic; single incident or recurrent; posterior segment, posterior, intermediate or pan uveitis) • Baseline visual acuity • Previous treatment history 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: Adalimumab and dexamethasone for treating non-infectious uveitis (2017) NICE technology appraisals guidance TA460. Review date July 2020. Related NICE Pathways:

	Eye conditions (2018) NICE Pathway.
Related National Policy	NHS England (September 2017) Manual for prescribed specialised services 2017/18, chapter 12 (page 44): Adult specialist ophthalmology services NHS England (2013) NHS standard contract for specialised ophthalmology (adult). Schedule 2 – The services – A. Service specifications. D12/S/a NHS England (2013) NHS standard contract for ophthalmic pathology service (all ages). D12/S(HSS)/b Department of Health (April 2016) NHS Outcomes Framework 2016-2017. Domains 2, 4, 5. Other policy: UK Vision Strategy Advisory Group (2013) UK Vision Strategy 2013-2018: Setting the direction for eye health and sight loss services

References

1. NHS Choices website. Uveitis – overview. Accessed July 2018.
2. European Medicines Agency (2010) Public summary of opinion on orphan designation: Fluocinolone acetonide for the treatment of non-infectious uveitis.
3. RNIB. Uveitis. Accessed July 2018.

