NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Proposed Health Technology Appraisal

Thymosin beta-4 and ciclosporin for treating dry eye syndrome

Draft scope (pre-referral)

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of thymosin beta-4 and ciclosporin within their licensed indications for treating dry eye syndrome.

Background

Dry eye syndrome (keratoconjunctivitis sicca) is an inflammation of the eyes caused by reduced tear production or excessive tear evaporation. Dry eye syndrome can be attributed to a variety of factors, including dry or air-conditioned environments, auto-immune diseases (such as Sjögren's Syndrome, rheumatoid arthritis, and lupus), and the adverse effects of some medications. Symptoms include irritation and redness in the eyes, blurred vision, and a sensation of grittiness or a foreign body in the eye. Dry eye syndrome can be painful and can have serious effects on quality of life and vision-based activities such as driving and reading.

The prevalence of dry eye syndrome is difficult to estimate as there is no defined diagnostic test. Although dry eye syndrome can affect people of any age, it is more prevalent in women and in older people. It is reported that 15 to 33% of people aged 65 years or over have dry eye syndrome. This is likely to be an underestimate of the true prevalence as people with mild symptoms may not report the condition to their doctor.

There is no cure for dry eye syndrome. Management aims to relieve discomfort and prevent damage to the cornea at the front of the eye. Current treatment options for dry eye syndrome depend on the severity of the condition. Lubrication treatments such as artificial tears and eye ointments may be used for the treatment of mild to moderate dry eye syndrome along with advice on lessening the impact of environmental factors that exacerbate dry eyes, for example, by using room humidifiers and re-assessing the use of some medications. In moderate cases, additional treatment options include anti-inflammatory agents (including topical corticosteroids such as betamethasone, dexamethasone, fluorometholone and prednisolone), advice on eye hygiene, and specialised eyewear. In severe cases, additional treatment options include autologous serum tears and surgery.

The technologies

Thymosin beta-4 (brand name unknown, RegeneRx Biopharmaceuticals) is a synthetic version of an endogenous 43-amino acid hormone that reduces inflammation in the eye and repairs damage to the cornea. It is administered as an eye drop.

Thymosin beta-4 does not currently have a UK marketing authorisation for the treatment of dry eye syndrome. It has been studied in clinical trials compared to placebo in adults with dry eye syndrome.

Ciclosporin (brand name unknown, Novagali) is a cationic emulsion that reduces inflammation in the eye by increasing secretions from the tear (lachrymal) gland. It is administered as an eye drop.

Ciclosporin does not currently have a UK marketing authorisation for the treatment of dry eye syndrome. It has been studied in clinical trials compared to placebo in adults with moderate to severe dry eye syndrome. Eye preparations of ciclosporin are already in use in the UK. These preparations include several special preparations or imports.

Interventions	• Thymosin beta-4 • Ciclosporin
Population	People with keratoconjunctivitis sicca (dry eye syndrome)
Comparators	• Thymosin beta-4 or ciclosporin will be compared with each other • Standard treatment for dry eye syndrome without ciclosporin or thymosin beta-4 (such as artificial tears, eye ointments, and topical corticosteroids)
Outcomes	The outcome measures to be considered include: • eye pain and discomfort • 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.

Other considerations	If the evidence allows, the following subgroups will be considered: mild, moderate, and severe cases of dry eye syndrome. Guidance will only be issued in accordance with the marketing authorisation.
Related NICE recommendations and NICE Pathways	None
Related NHS England Policy	None

Questions for consultation

Have all relevant comparators for thymosin beta-4 and ciclosporin been included in the scope?

- Which treatments are considered to be established clinical practice in the NHS for dry eye syndrome?
- Should these treatments only be considered for moderate or severe dry eye syndrome?
- Should autologous serum tears or surgery be included as comparators?
- Are there are other comparators that should be included?

Should damage to the eye that may lead to visual impairment or, for example, the need for a corneal transplant, be included as an outcome?

Where are thymosin beta-4 and ciclosporin likely to be used in the current treatment pathway for dry eye syndrome?

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

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 thymosin beta-4 and ciclosporin will be licensed;

- 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 these technologies to be innovative in their potential to make a significant and substantial impact on health-related benefits and how they might improve the way that current need is met (are they a 'step-change' in the management of the condition)?

Do you consider that the use of these technologies 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.

NICE intends to appraise these technologies through its Multiple Technology Appraisal (MTA) 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/aboutnice/howwework/devnicetech/technologyappraisalprocessguides/technology_appraisal_process_guides.jsp), In particular, NICE welcomes comments on whether any other technologies for dry eye syndrome should also be included in this appraisal.

Subject to referral by the Department of Health, the invite for participation in this technology appraisal is anticipated for after January 2014, when new arrangements for the pricing of pharmaceuticals are expected to be in place. Consequences for this appraisal will be explored through further consultation on the scope pre-invitation.