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[Intervention Review]

Systemic treatment for blepharokeratoconjunctivitis in children

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ABSTRACT

Background

Blepharokeratoconjunctivitis (BKC) is a type of inflammation of the surface of the eye and eyelids which can affect children and adults. BKC involves changes of the eyelids, dysfunction of the meibomian glands, and inflammation of the conjunctiva and cornea. Chronic inflammation of the cornea can lead to scarring, vascularisation and opacity. BKC in children can cause significant symptoms which include irritation, watering, photophobia and loss of vision. Loss of vision in children with BKC may be due to corneal opacity, refractive error or amblyopia.

BKC treatment is directed towards the obstruction of meibomian gland openings, the bacterial flora of lid margin and conjunctiva, and ocular surface inflammation. Dietary modifications that involve increased intake in essential fatty acids (EFAs) may also be beneficial. Both topical and systemic treatments are used; this Cochrane review focuses on systemic treatments.

Objectives

To assess and compare data on the efficacy and safety of systemic treatments (including antibiotics, nutritional supplements and immunosuppressants), alone or in combination, for BKC in children aged between zero to 16 years.

Search methods

We searched CENTRAL (which contains the Cochrane Eyes and Vision Trials Register) (2016, Issue 3), Ovid MEDLINE, Ovid MEDLINE In-Process and Other Non-Indexed Citations, Ovid MEDLINE Daily, Ovid OLDMEDLINE (January 1946 to April 2016), EMBASE (January 1980 to April 2016), the ISRCTN registry (www.isrctn.com/editAdvancedSearch), ClinicalTrials.gov (www.clinicaltrials.gov) and the World Health Organization (WHO) International Clinical Trials Registry Platform (ICTRP) (www.who.int/ictcp/search/en). We did not use any date or language restrictions in the electronic searches for trials. We last searched the electronic databases on 21 April 2016.

Selection criteria

We searched for randomised controlled trials that involved systemic treatments in children aged between zero to 16 years with a clinical diagnosis of BKC. We planned to include studies that evaluated a single systemic medication versus placebo, and studies that compared two or multiple active treatments. We planned to include studies in which participants receive additional treatments, such as topical antibiotics, anti-inflammatories and lubricants, warm lid compresses and lid margin cleaning.

Data collection and analysis

Two review authors independently screened the literature search results (titles and abstracts) to identify studies that possibly met the inclusion criteria of the review. We divided studies into 'definitely include', 'definitely exclude' and 'possibly include' categories. We made a final judgement as to the inclusion or exclusion of studies in the 'possibly include' category after we obtained the full text of each article.

Main results

No report or trial met the inclusion criteria of this Cochrane review; no randomised controlled trials have been carried out on this topic. There is a lack of standardised outcome measures.

Authors' conclusions

There is currently no evidence from clinical trials regarding the safety and efficacy of systemic treatments for BKC. Trials are required to test efficacy and safety of current and future treatments. Outcome measures need to be developed which can capture both objective clinical and patient-reported aspects of the condition and treatments.

PLAIN LANGUAGE SUMMARY**Systemic treatment for blepharokeratoconjunctivitis in children**

Blepharokeratoconjunctivitis (BKC) is a condition that involves inflammation of the eyelids and the front of the eye. It occurs in children and adults. Children with BKC have watering, itching, red eyes that are painful in bright light. They may develop loss of vision due to scarring of the cornea, which can be described as the front windscreen of the eye. Various treatments are given for BKC, including antibiotics, anti-inflammatory agents and dietary supplements. Sometimes these treatments are given as eye drops and ointment while in severe cases they may be given systemically (usually orally). It can also be easier to administer medication to children orally than giving eye drops or ointment.

This Cochrane review aimed to assess the effects of systemic treatments for BKC in children aged between zero to 16 years. We searched the published literature and registers of clinical trials for studies. We did not find any high quality research studies in this subject area. No report or trial met the inclusion criteria of this Cochrane review. The studies we found did not compare the treatment against another treatment or placebo in a randomised way, so we cannot be certain that the effects of treatment seen are not due to other factors. Doctors also used many different ways to measure the effects of treatments. The searches are current to April 2016.

We recommend further research into the effects of systemic treatment for BKC. We also recommend developing new ways of measuring the effects of treatments taking into account clinical measurements and children's and families' opinions on their condition.