2016 - IONTOPHORESIS ASSISTED CORNEAL CROSSLINKING

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Summary

Introduction: keratoconus (KC) is a degenerative disease of the cornea of unknown etiology. It is characterised by a progressive thinning of the cornea, which adopts an irregular cone-like shape, causing substantial visual deterioration. Currently, the available therapeutic options offer a temporary correction of the refractive error but do not address the underlying problem of the cornea's biomechanical integrity or the possibility of reducing and/or halting the progression of the disease. Iontophoresis corneal collagen cross-linking (I-CXL) is a non-invasive transepithelial technique, which seeks to increase the cornea's biomechanical stability by combining a riboflavin (vitamin B2) ophthalmic solution and ultraviolet-A radiation. To boost riboflavin diffusion through the intact epithelium, a local low-intensity electric field is applied. This procedure is proposed as a therapeutic option capable of halting or reducing disease progression.

Objectives: assess the clinical effectiveness and safety of I-CXL as a therapeutic technique in the treatment of corneal ectasias and other corneal diseases.

Methods: we performed a systematic review of health literature until may 2016, in relevant health databases: Medline, Embase, Centre for Reviews and Dissemination (CRD), HTA (Health Technology Assessment), International Network of Agencies for Health Technology Assessment (INAHTA), ECRI, Cochrane Plus Library, ISI Web of Science, as well as a specific search of ongoing clinical trials. This process was completed by a manual review of the bibliographic references cited in these papers, and additional searches using meta-search engines, such as Google Scholar, and websites of national and international organisations and assessment agencies, to provide all relevant information of interest. Two independent investigators, selected and reviewed the articles according to pre-established selection criteria, with any disagreements being settled by consensus. The information was synthesized in evidence tables, using a systematic methodology. The studies were classified according to their methodological quality, on the basis of the recommendations of the Spanish Network of Health Technology Assessment Agencies and National Health System Services (RedETS) guidelines for the drawing-up and adaptation of fast-track health technology assessment reports.

Results, discussion and conclusions: See pdf summary below.

DOCUMENTOS RELACIONADOS

Summary (pdf)

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