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Title **Iontophoresis assisted corneal *cross-linking (CXL-I)***

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Reference Cantero Muñoz P, Maceira Rozas MC. Entrecruzamiento del colágeno corneal asistido con iontoforesis: CXL-I. Santiago de Compostela: Agencia Gallega para la Gestión del Conocimiento en Salud (ACIS). Unidad de Asesoramiento Científico-técnico, avalia-t; 2016. Report No.: CT2016/03. Available from: https://avalia-t.sergas.gal/DXerais/687/CT201603CrosslinkingDEF.pdf

Aim:
The main objective of this study was to assess the clinical effectiveness and safety of I-CXL as a therapeutic technique in the treatment of corneal ectasias and other corneal diseases.

Conclusions and results:
One RCT and 4 case series were included. Overall, 234 procedures in 204 patients were described, and I-CXL was used in all cases for treatment of progressive KC. The RCT's results indicated that I-CXL was an effective method for stabilising or halting KC progression at 2 years, without significant improvements being obtained in visual or topographic parameters. Although it succeeded in achieving adequate B_2 concentration in the corneal stroma, I-CXL proved less effective than classical CXL. The I-CXL failure rate was 1.3% *versus* 0% for classic CXL. The presence and depth of the corneal demarcation line was superior with CXL. Despite maintaining the corneal epithelium intact, I-CXL was neither a complication- nor a pain-free treatment.

I-CXL is judged to be capable of stabilising and/or reducing the progression of KC, with its efficacy being lower than that of classic CXL. It is considered to be a low-risk procedure, and most of the complications are transient and of scant severity. The existing evidence is very limited both in quantity and quality, and is based on some 200 patients treated worldwide. In the absence of comparative quality studies (CXL *vs* I-CXL) and in view of the uncertainty surrounding its long-term efficacy and safety, I-CXL cannot be said to improve on the outcomes of the classical technique.

Methods:
A systematic review of the scientific literature was made 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. To retrieve unpublished data, the process was completed by a search of the databases of ongoing studies, by a manual review of the bibliographic references cited in these papers, and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. Two independent reviewers verified independently that the papers were compliant with established inclusion and exclusion criteria. The data were summarized 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.

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