CANALOPLASTY FOR OPEN ANGLE GLAUCOMA

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ABSTRACT

Introduction: The term, "glaucoma", refers to a group of ocular diseases that cause damage to the optic nerve, in most instances due to the increase in intraocular pressure (IOP). It is the second leading cause of blindness world-wide, with the most common type being chronic open angle glaucoma (COAG). Treatment is based on reducing IOP, and one of the surgical alternatives is canaloplasty. This is a non-perforating filtration surgical technique aimed at the complete restoration of the physiological drainage canal.

Objectives: To assess the canaloplasty procedure for the treatment of OAG in terms of its effectiveness and safety. The variables targeted for assessment were: changes in IOP; and a reduction in the drugs needed to control pressure.

Methods: A search was made of the scientific literature until July 2012, in: a) specific databases (Health Technology Assessment, Cochrane Library Plus, International Network of Agencies for Health Technology Assessment, etc); b) general databases (Medline, Embase, Índice Médico Español, etc.); and, c) databases of ongoing studies (Clinical Trials).

Two reviewers, acting independently, selected and reviewed the papers on the basis of pre-established inclusion criteria. The data were then summarised in evidence tables.

Results and discussion: Of the 135 papers yielded by the bibliographic search, 6 met the inclusion criteria. The scientific evidence was obtained from two systematic reviews covering 6 primary studies that we analysed, and a further 4 not included in the reviews. Apart from one study classified as a multicentre non-randomised uncontrolled trial, the rest were case series with very few patients. The results obtained were uniform and showed a reduction in both IOP and the number of topical drugs administered. In addition, the technique displayed a high safety margin with few side-effects in both the short and long term. Even so, current evidence is based on studies having a small sample size and, for the most part, a short follow-up.

Conclusions: Canaloplasty reduces IOP and the number of topical drugs needed, with values being maintained 3 years after the intervention. The procedure showed itself to be safe, with a low incidence of adverse effects, both short- and medium/long-term.

Recommendations: Canaloplasty displays an efficacy and safety similar to that of trabeculectomy (gold standard), and can be used as a surgical treatment in OAG patients who are unable to achieve a target IOP. It would be advisable for reference centres to be set up to implement this procedure, with due attention paid to the learning curve required by the technique.