Eosinophilic esophagitis in adults: a systematic review
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CRD summary
This review assessed eosinophilic oesophagitis, including the efficacy of five different therapies, in adults. The authors reported that one trial with corticosteroids before bougienage may reduce active inflammation and the complication rate. However, the authors’ findings should not be relied upon, as this was a very poorly reported review that included a large number of very small, poor-quality studies.

Authors’ objectives
To review the available evidence regarding eosinophilic oesophagitis (EO) in adults. More specifically, the review defined the prevalence of presenting symptoms, endoscopic, manometric and oesophageal pH findings, and also evaluated the efficacy of therapeutic interventions in adults with EO. Only data relating to the efficacy of therapeutic interventions is reported below.

Searching
PubMed and MEDLINE were searched for articles published in the English language between January 1978 and June 2005; the search terms were reported. The reference lists of retrieved articles and abstracts from two major conferences (Digestive Disease Weeks and United European Gastroenterological Weeks; from 2000 to June 2005) were handsearched for additional studies. The authors of abstracts were contacted for further information.

Study selection
Study designs of evaluations included in the review
The authors did not state any predefined study criteria, although they did state that case studies were included. However, it was unclear from the information presented what types of studies were included in the assessment of therapeutic interventions.

Specific interventions included in the review
Any therapeutic intervention aimed at treating EO in adults was included. The interventions included in the review were classified into five groups: bougienage (push dilators), proton-pump inhibitors (PPIs), systemic corticosteroids, inhaled corticosteroids and montelukast. Specific details of the drugs and treatment regimens were not reported. With regard to the comparators, no predefined criteria were reported.

Participants included in the review
Adults with a diagnosis of EO established from oesophageal biopsies showing the presence of more than 15 eosinophils/high power field were eligible. Studies including children and adolescents were excluded, as were studies with cases of eosinophilic gastroenteritis or those with limited histological details, presenting symptoms and endoscopic findings.

Outcomes assessed in the review
The authors did not state any predefined outcome criteria. However, the outcomes reported in the review included incidence, improvement and recurrence of symptoms, histological findings and adverse events.

How were decisions on the relevance of primary studies made?
Two reviewers independently assessed each study to determine its relevance. Any disagreements were resolved by consensus.

Assessment of study quality
The authors did not state that they assessed validity.
**Data extraction**
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. In addition to standard types of date, the following were extracted: mean age or age range, gender ratio, presenting symptoms, history of allergies, peripheral eosinophilia and elevation of immunoglobin E. The numbers and percentages of patients experiencing outcome measures were reported.

**Methods of synthesis**
How were the studies combined?
The studies were combined in a narrative, grouped by treatment type.

How were differences between studies investigated?
The authors did not specifically discuss differences between the studies or perform any statistical tests to assess heterogeneity.

**Results of the review**
Eleven studies (n=64) assessed push dilators (bougienage), 3 studies (n=30) assessed PPIs, 6 studies (n=36) assessed inhaled corticosteroids, 5 studies (n=19) assessed systematic corticosteroids and 1 study (n=8) assessed monteluclast.

In general, the studies were small and appeared to lack control groups. The authors stated that there was little consensus regarding the dose and duration of any of the interventions.

Bougienage (push dilators) (11 studies): in the majority of cases extensive mucosal sheering was observed after the passage of dilators. Oesophageal perforation was provoked in 1 (1.5%) patient and 6 (9.3%) patients experienced severe chest pain requiring analgesics and hospitalisation. Immediate symptomatic improvement was noted in 53 (83%) patients. Symptomatic recurrence was recorded in 12 patients (2 studies) after 3 to 8 months.

PPIs (3 studies): 8 out of 30 patients experienced symptomatic improvement; the rest did not respond to therapy.

Systemic corticosteroids (5 studies): 19 patients responded to therapy.

Inhaled corticosteroids (6 studies): 34 (95%) out of 36 patients experienced symptomatic improvement.

Monteluclast: 6 of the 8 patients in 1 study experienced a symptomatic improvement after the administration of monteluclast.

**Authors' conclusions**
A trial with corticosteroids before bougienage may reduce active inflammation and the complication rate. The early diagnosis of EO and the initiation of appropriate treatment may avert or delay structure formation.

**CRD commentary**
This was a broad systematic review covering a number of areas including therapeutic efficacy. Reporting of the review methods and data was poor. The literature search was also quite limited as it only included publications in English. There appears to have been no assessment of study quality and there were almost no details of the types of study designs included in the review. From the very brief descriptions given in the text, it would appear that most, if not all, of the studies were uncontrolled and therefore of poorer quality.

The lack of study details and data make it difficult to assess the level of heterogeneity between the studies or even how reliable the individual results are likely to be. The authors highlighted in their discussion that the majority of the studies had very small sample sizes, which was likely to affect the robustness of their findings. Overall, this is a poorly reported review based on what appears to be poor-quality data, so the authors' findings should be treated with caution.
Implications of the review for practice and research

Practice: The authors did not state any implications for practice.

Research: The authors did not state any implications for further research. However, given the sample size and poor quality of the included studies, it would seem appropriate to recommend that further large-scale randomised studies comparing the different therapeutic interventions are conducted.

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