A systematic review of the risk of perforation during esophageal dilation for patients with eosinophilic esophagitis

Jacobs JW, Spechler SJ

CRD summary
The review concluded that the risk of oesophageal perforation from dilation in patients with eosinophilic oesophagitis may have been exaggerated. The conclusions reflected the evidence presented. However, concerns about several aspects of the review process and the poor quality of the evidence mean that their reliability is unclear.

Authors' objectives
To evaluate the risk of perforation during oesophageal dilation in patients with eosinophilic oesophagitis.

Searching
PUBMED was searched for studies published in English between 1978 and November 2009. Abstracts presented at the annual scientific meetings of the American Gastroenterological Association and American College of Gastroenterology from 2005 to 2009 were consulted. Search terms were reported.

Study selection
Patients with a diagnosis of eosinophilic oesophagitis established from oesophageal biopsy (≥15 eosinophils/hpf) at the time of dilation or earlier who underwent oesophageal dilation therapy were eligible. Reports that described an oesophageal perforation were considered if they resulted from an oesophageal dilation rather than a spontaneous oesophageal perforation (Boerhaave's syndrome) or from oesophageal instrumentation other than dilation.

Most patients were men between the ages of 20 and 50. Some received multiple dilations. It appeared that endoscopy was used in all cases.

Two reviewers independently selected the studies for inclusion.

Assessment of study quality
The authors did not state that they assessed the quality of the studies.

Data extraction
Outcomes data (number of oesophageal perforations and rates of tearing) were extracted. The authors did not state how many reviewers extracted data.

Methods of synthesis
The results of the studies were presented in a narrative synthesis.

Results of the review
Eighteen studies were included. These included 468 patients who underwent a total of 671 endoscopic dilations (the authors noted that some may have overlapped). All were retrospective case reports.

Among the 671 unique endoscopic dilations there was only one description of a perforation that was clearly caused by the dilation itself. Eleven of the 18 reports provided information on oesophageal mucosal tears caused by dilation, which occurred in most of these studies.

Authors' conclusions
The review did not reveal an inordinate frequency of oesophageal perforation from dilation in patients with eosinophilic oesophagitis. It was not clear that dilation was any more hazardous for patients with eosinophilic oesophagitis than for patients with other causes of oesophageal stricture. The risk of oesophageal perforation from dilation in patients with eosinophilic oesophagitis may have been exaggerated.
CRD commentary

The review question was clear and appeared to be supported by well-defined selection criteria. A relatively limited number of bibliographic sources were consulted and language restrictions were applied to the searches so some studies may have been missed. Additional cases of perforations that were not deemed to be sufficiently well reported to be included in the review were presented briefly. Contacting the authors of these studies may have been appropriate to confirm ineligibility. It was unclear whether data were extracted in duplicate to reduce reviewer error and bias during data extraction.

The quality of the included studies was not assessed formally. All data came from generally small retrospective case reports which suggested that the quality of the evidence base was suboptimal. The choice of a narrative synthesis was appropriate in view of the limited number of events and types of studies included.

The conclusions reflected the evidence presented. However, concerns about several aspects of the review process and the poor quality of the evidence mean that their reliability is unclear.

Implications of the review for practice and research

Practice: The authors stated that patients with eosinophilic oesophagitis receiving oesophageal dilation prescription should be advised of the strong possibility that dilation will result in an oesophageal tear that can cause considerable chest pain and odynophagia that may persist for days. The authors stated that despite the limited risk of perforation found by the review, clinicians should still perform the procedure with caution.

Research: The authors did not state any implications for research.

Funding

Office of Medical Research, US Department of Veterans Affairs and the National Institutes of Health, USA.

Bibliographic details


PubMedID

20238250

DOI

10.1007/s10620-010-1165-x

Original Paper URL

http://link.springer.com/article/10.1007%2Fs10620-010-1165-x

Indexing Status

Subject indexing assigned by NLM

MeSH

Adolescent; Adult; Aged; Dilatation /adverse effects; Eosinophilia /complications /therapy; Esophageal Perforation /etiology; Esophageal Stenosis /etiology /therapy; Esophagitis /complications /therapy; Female; Humans; Male; Patient Selection; Risk Assessment; Risk Factors

AccessionNumber

12010005019

Date bibliographic record published

01/12/2010

Date abstract record published

28/08/2013
Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.