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The ringed esophagus

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The "Ringed Esophagus" describes the classic appearance of Eosinophilic Esophagitis (EE) as seen on an upper GI barium study or barium esophagram. The term ringed esophagus was first coined in the radiology literature in 2005 [1], although a case report describing multiple web-like strictures throughout the esophagus dates back to 1979 [2], while another case report describing ring-like stricturing in eosinophilic esophagitis dates back to 1981 [3].

Eosinophilic Esophagitis is an inflammatory condition which affects primarily young men, manifesting in long-standing dysphagia with food impaction which is unresponsive to antireflux therapy [1]. Approximately 50% of patients have an associated history of atopy and will demonstrate peripheral eosinophilia [4]. The etiology is uncertain but believed to represent an aberrant inflammatory response to ingested allergens [4]. Patients often respond to treatment with steroids and protein-free elemental diets as proteins are presumed to incite the allergic reaction [1].

Radiographically, the diagnosis of EE is suggested by segmental strictures in the esophagus which produce characteristic ring-like indentations (Fig. 1), the appearance of which is reminiscent of corrugated piping (Fig. 2). Confirmatory diagnosis is performed with endoscopic biopsy showing more than 15 eosinophils per high power field on histologic examination [4]. The sensitivity of barium studies can be low, with one study finding a normal UGI in 12/17 (70.5%) of children with EE [5]. It is nevertheless an important test for the evaluation of eosinophilic esophagitis and can show additional fluoroscopic manifestations of this disease such as a small caliber esophagus and intramural pseudodiverticula [6].

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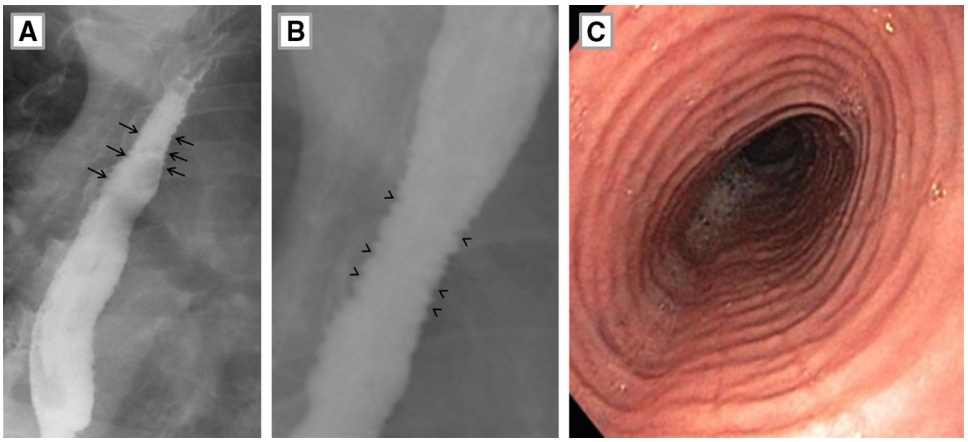

Fig. 1. Twenty-two-year male patient with eosinophilic esophagitis. Oblique single contrast barium esophagram with multiple segmental indentations in the mid-thoracic esophagus (arrows in **A**). The symmetric ring-like nature of these indentations is better seen on the second coned in oblique projection (arrowheads in **B**). Endoscopy confirmed ringed esophagus appearance (**C**).

Fig. 2. Stacked corrugated steel pipes. Courtesy of https://commons.wikimedia.org/wiki/File:Integral_corrugated_steel_pipe.jpg.

Compliance with ethical standards

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Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent Statement of informed consent was not applicable since the manuscript does not contain any patient data.

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