

Symptomatic heterotopic gastric mucosa in the upper oesophagus

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Abstract

The presence of heterotopic gastric mucosa in the upper oesophagus has been reported to occur in up to 10 per cent of individuals but it is usually asymptomatic. We present two patients with symptomatic oesophageal heterotopic gastric mucosa and discuss the aetiology, pathogenesis, and management of the condition.

Key words: Oesophagus; Gastric mucosa

Case reports

Case 1

A 56-year-old female presented to her GP with a 12-month history of a foreign body sensation in the right side of her throat. A barium swallow showed an irregularity/filling defect at level T1/T2 (Figure one). Initially she was referred for a flexible oesophago gastroduodenoscopy, which although normal, failed to visualize the upper oesophagus adequately.

We performed rigid oesophagoscopy and discovered a thickened, irregular patch of mucosa measuring 2 × 2 cm just below the upper oesophageal sphincter on the right side. Biopsy showed gastric-type epithelium including specialized gastric cells. There was no dysplasia nor neoplasia, and no *Helicobacter pylori* organisms were detected.

The patient was initially commenced on the proton pump inhibitors, omeprazole 40 mg then lansoprazole 30 mg, both once daily, but developed side-effects of a rash, periorbital pruritus, and distressing cacostmia with both drugs. Her symptoms were abolished following a six-week course of cimetidine 400 mg twice daily and she has remained asymptomatic for almost one year.

Case 2

A 47-year-old man presented to his GP with an 18-month history of a foreign body sensation in his throat. He had a past medical history of duodenal ulceration, and was again referred initially for a flexible oesophagogastroduodenoscopy which was normal apart from scarring of the duodenal cap. His symptoms persisted and he was referred for an ENT opinion. A provisional diagnosis of globus pharyngeus was made following a normal barium swallow, but due to persistent symptoms he underwent rigid oesophagoscopy. This revealed a 2 × 3 cm 'velvety' area of raised mucosa on the right side of the anterior wall of the oesophagus just below the cricopharyngeus. Biopsy showed gastric-type epithelium with normal adjacent oesophageal squamous epithelium.

Following a six-week course of omeprazole, 40 mg once daily, his symptoms resolved and he has remained asymptomatic for six months.

Discussion

The presence of heterotopic gastric mucosa in the upper oesophagus is common but rarely causes symptoms. It was first described by Schmidt (1805) and incidences of 4.5 per cent from post-mortem studies (Rector and Connerly, 1941), and between 3.8 per cent (Jabbari *et al.* 1985) and 10 per cent (Borhan-Manesh and Farnum, 1991) from flexible endoscopic examination have been reported. It may be found throughout the gastrointestinal tract, and in spinal cord and intrathoracic cysts (Wolff, 1971).

Heterotopic gastric mucosa in the upper oesophagus is considered to be congenital in origin, islands of gastric type mucosa being left in the proximal oesophagus during embryogenesis (Gray and Skundalakis, 1972; Jabbari *et al.*, 1985; Shah *et al.*, 1986). However, it has been suggested that in some cases it represents a reparative error in the presence of chronic inflammation as occurs in Barrett's oesophagus (Rattner and McKinley, 1986). Situated invariably just below the upper oesophageal sphincter, macroscopically it presents as a velvety, red patch with distinct borders, ranging from a few millimeters in size to complete encirclement of the oesophagus. Microscopically there is gastric-type mucosa with parietal and chief cells, and a variable inflammatory cell infiltrate.

Acid production has been demonstrated under pentagastrin stimulation, with a reduction in the pH at the area in large patches (Jabbari *et al.*, 1985). It is probable that alkaline saliva neutralizes this in most cases but if this fails symptoms may occur due to acid irritating the oesophageal mucosa or inducing an increase in the cricopharyngeal tone. Symptoms certainly occur when complications arise, and case reports of dysphagia (Raine, 1983), oesophago-tracheal fistula (Kohler *et al.*, 1988), and adenocarcinoma (Carrie, 1950) associated with heterotopic gastric mucosa in the upper oesophagus have been documented.

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FIG. 1

Barium swallow showing an irregularity/filling defect at level T1/T2.

It is clear that symptoms do occur in some patients, and therefore, it is an important entity which must be included in the differential diagnosis of a patient who presents with a foreign body sensation in the throat.

The initial investigation of choice is a barium swallow and this is said to produce quite characteristic appearances: either a discrete shallow depression surrounded by a subtle

rimlike elevation, or paired indentations on the same wall (Ueno *et al.*, 1994). However, *Case 2* had a normal barium swallow and this underlines the importance of proceeding to rigid endoscopy in those patients who remain symptomatic despite a normal barium swallow.

The use of the flexible endoscope to identify lesions of the upper third of the oesophagus seems routine in many countries, especially the USA, and indeed most published research on the topic is by endoscopists. However, both of our patients underwent flexible endoscopy prior to referral to us and this failed to identify the problem. It is well recognised that the upper oesophagus, in particular the area of the cricopharynx and just below, is difficult to visualise with the flexible endoscope. Endoscopists are unfamiliar with this area which is often poorly inspected or simply ignored. When introducing the scope the area is often already passed, and on withdrawal inspection is often inadequate, difficulties being compounded by repeated contractions of the cricopharynx. Therefore, it is suggested that all patients with such symptoms are referred for an ENT opinion. Rigid endoscopy can then be performed so that the area can be adequately inspected and more sinister pathology excluded.

Both patients have responded well to treatment, and similar reports of response to proton-pump inhibitors and H₂-antagonists have been documented in the literature (Jabbari *et al.*, 1985; Payne-James *et al.*, 1991). Failure of medical treatment would be an indication for endoscopic ablation of the heterotopic mucosa (Shroeder *et al.*, 1987). The question of duration of treatment and follow-up is debatable but it would seem reasonable to stop treatment when the patient has been asymptomatic for six to eight weeks, allowing the GP rapid referral if symptoms recur or complications arise.

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