

View from Within: Radiology in Focus Lateral pharyngeal diverticulum

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Abstract

We report a case of a lateral pharyngeal diverticulum arising from the right vallecula. The aetiology and clinical features of these rare lesions are discussed. Diagnosis, which is difficult clinically, was made by barium swallow examination of the pharynx. The importance of contrast radiology in the investigation of pharyngeal symptoms is emphasized by this case.

Introduction

Pharyngeal diverticula are uncommon and may arise from different parts of the pharynx. The commonest type is the posterior pharyngo-oesophageal, or Zenker's, diverticulum which arises from the posterior hypopharynx through the space between the inferior constrictor and the cricopharyngeus. Much less common are lateral diverticula which may arise from the tonsil fossa, the vallecula, or the pyriform sinus on either side. Lateral pharyngeal diverticula arising in the vallecula have been described sporadically in the past (Kaufman, 1956; Fowler, 1962), but remain unfamiliar to many surgeons. The absence of any specific clinical features together with the small size of the internal opening into the pharynx makes diagnosis of lateral diverticula difficult without preliminary contrast radiology of the pharynx. We report a diverticulum arising in the right vallecular which was diagnosed by barium swallow.

Case report

A fit 45-year-old woman presented with a history of regurgitation of food, occasional choking, and a sensation of a lump in the throat for several months. Examination was normal and, in particular, no abnormality was found on indirect laryngoscopy and examination of the neck. A barium swallow demonstrated a well-defined antero-lateral diverticulum arising from the right vallecula (Figs. 1–3). The radiological findings were confirmed at pharyngoscopy. A 1 cm slit-shaped, transverse opening was found in the right vallecula and led into a sizeable pouch containing food debris. The rest of the pharynx and larynx were normal.

The diverticulum was approached through an upper cervical, skin-increase incision after packing with ribbon-gauze. The thin-walled structure was found medial to the inferior border of the submandibular gland and appeared to protrude through the thyrohyoid membrane. The sac was followed up to its neck and was ligated and excised. Post-operative recovery was uneventful.

Discussion

Pharyngeal diverticula are uncommon, though their true incidence may be difficult to ascertain. The most commonly encountered pharyngeal diverticula are the posterior pharyngo-oesophageal, which are reported to occur in only 1.8 per cent of patients investigated for dysphagia (Macmillan, 1932).



FIG. 1

Lateral neck: Barium-swallow X-ray showing a high, anterior pharyngeal diverticulum.



FIG. 2

Antero-posterior view showing the diverticulum lateral to the right side of the pharynx.

Much less frequent are true diverticula arising from the lateral pharyngeal wall. The aetiology of lateral diverticula has been described in detail previously. Bachman *et al.* (1968) classified lateral pharyngeal protrusions into lateral pharyngeal bulges and true lateral pharyngeal diverticula. Lateral pharyngeal bulges, which are often seen as incidental findings on barium swallow examinations, are small herniations at weak points in the pharyngeal wall such as the unsupported part of the thyrohyoid membrane and the tonsil fossae. Herniation in these cases may result from muscular weakness in older people, or from increased intraluminal pressure, and is usually bilateral but may be unilateral.

True lateral pharyngeal diverticula may be acquired or congenital. Acquired diverticula which are rare have been described in the pyriform fossae and are thought to be pulsion diverticula. Congenital lateral pharyngeal pouches, including our case, are thought to represent remnants of the second, third and fourth pharyngeal pouches which are not obliterated during development and which retain a connection with the pharyngeal lumen (Bachman *et al.*, 1968). Vestiges of the second pouch, which is normally obliterated apart from the tonsil fossa, are most likely to have an external connection in the form of a branchial fistula. Vestiges of the third pouch are probably responsible for diverticula opening in the vallecula as in this case. Fourth pouch vestiges are thought to be responsible for diverticula opening in the pyriform sinus. (Fowler, 1962).

The symptoms of lateral pharyngeal diverticula are most commonly dysphagia, regurgitation of undigested food, dis-

comfort in the throat and in some cases the presence of a lump in the neck (Liston, 1985). The similar presentation of lateral diverticula and the more common posterior Zenker's diverticulum makes clinical differentiation difficult if not impossible.

The definitive investigation in the management of any patient with symptoms suggestive of a pharyngeal diverticulum is a barium swallow X-ray. It is often tempting for the clinician to proceed directly to pharyngoscopy without a preliminary contrast X-ray in the belief that this will allow diagnosis of any pharyngeal lesion, including a diverticulum. The importance of having the information from barium swallow prior to direct pharyngoscopy is emphasized by this case. The presenting symptoms in this case did not differ from those usually produced by the more common posterior pharyngeal diverticulum. The opening in the right vallecula was a small transverse slit which would almost certainly have been missed without the available radiological evidence of its presence. The rarity of lateral pharyngeal diverticula together with the lack of any specific symptoms or signs make diagnosis without preliminary radiology difficult if not impossible.

Conclusion

Lateral pharyngeal diverticula are rare but important causes of dysphagia which are most reliably diagnosed by barium contrast radiology. Direct examination of the pharynx in all patients with pharyngeal symptoms, and in particular symp-

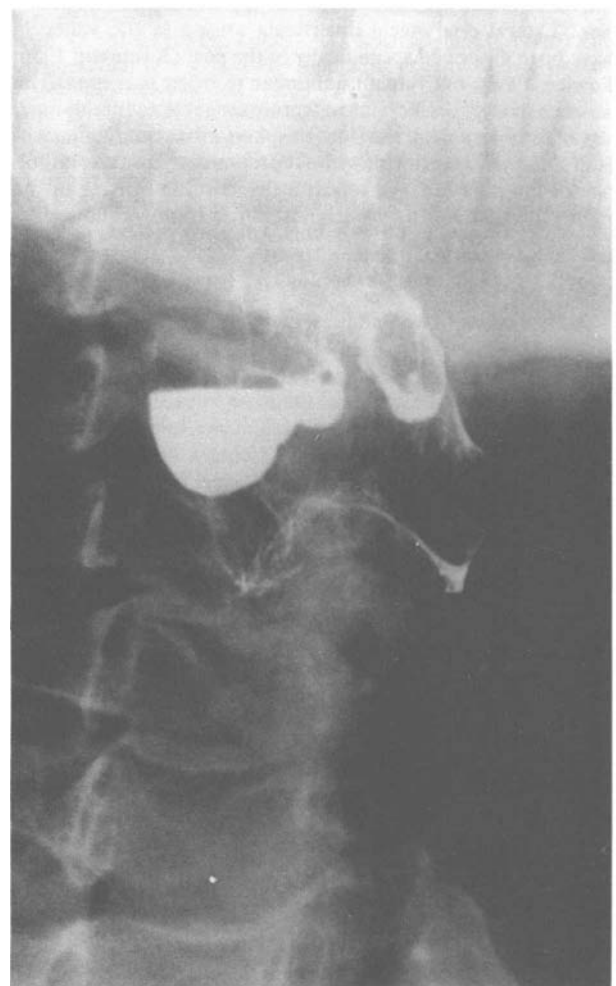


FIG. 3

Oblique neck X-ray: Residual barium clearly demonstrating communication between the right vallecula and the diverticulum.

toms suggesting the presence of a pharyngeal diverticulum, should be preceded by barium swallow examination. Diagnosis in this case would have been very difficult, if not impossible, without a preliminary barium swallow.

References

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