ZENKERS DIVERTICULUM

(Case Report)

Lt Col RS BHADAURIA^{*}, Col H RAMCHANDRAN⁺

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Introduction

Zenkers diverticulum, usually a pulsion diverticulum is an oesophageal outpouching in the region of the cricopharyngeus, and typically grows in a posterolateral and inferior direction. It is known by several other names-posterior pharyngeal pulsion diverticulum, pharyngo-oesophageal pouch, retropharyngeal pouch, and posterior pharyngeal pouch [1].

An eighty years old patient with a Zenkers diverticulum was operated upon despite his age and despite being a poor anaesthetic risk due to bronchial asthma and ischaemic heart disease. The case is being reported to emphasize that elderly patients tolerate surgery well.

Case Report

An eighty-years-old retired officer reported with complaints of difficulty in swallowing, coughing, splurting and regurgitation of food in the mouth on lying down for last 3 years. The symptoms had been increasing gradually. He had to adopt a peculiar posture and be undisturbed during meals, which took about one hour to be completed. As a result he avoided company of friends and never took cats in front of anybody. He was a non smoker, non alcoholic and led a retired life. He also suffered from bronchial asthma and ischaemic heart disease.

On examination, he was frail but active. There was no palpable mass in the neck and laryngeal crepitus was present. The voice had a slightly muffled quality. Indirect laryngoscopy revealed slight pooling of saliva in both piriform fossae. Movements of both vocal cords were normal. There was a grade I systolic murmur in the mitral area. He also had varicose veins in both legs and an inguinal hernia. X ray chest revealed cardio-thoracic ratio of 14:29 and emphysematous lungs. Barium studies revealed a pulsion diverticulum (Fig 1). Echocardiogram revealed mild mitral regurgitation. Heart compliance was reasonably good. Systolic left ventricular function efficiency was 50%. Pulmonary function test showed reversible small airway obstruction.

Preoperatively, he was given clear fluids for two days and made to sleep in reverse trendelenberg to help empty the pouch. He was put on deriphylline, asthelin, digoxin and antacid. The pouch was approached by a transverse incision on left side at the level of superior border of cricoid. The omohyoid was cut for better exposure. The empty pouch was located with great diffi-

culty. It was excised and the cut end was sutured in two layers. Cricopharyngeal myotomy was done. Postoperatively voice was found to be weak and breathy. Indirect laryngoscopy showed a left vocal cord palsy. Nasogastric tube was retained for a week. Histopathological examination of the excised pouch did not show evidence of malignancy. Follow up after one year revealed that the right vocal cord was adequately compensating. The voice had improved considerably. There was no regurgitation or aspiration but patient did not feel totally symptom free regarding dysphagia. A repeat barium swallow did not show any evidence of recurrence or obstruction.

Discussion

A number of studies [2,3]) on post operative patients of Zenkers diverticulum (ZD) have shown that

Fig. 1 : Barium study showing a diverticulum (arrow)

^{*} Classified Specialist (ENT), MH Kirkee, Pune-20, ⁺ Senior Advisor Surgery, MH Bareilly.

the causative factor is not only an incoordination of the cricopharyngeal sphincter but relates to a generalized oesophageal dysfunction. Most patients are not totally symptom free and excision of a pharyngeal pouch does not appear to restore a normal swallowing mechanism.

Though Zenkers diverticulum is usually a pulsion diverticulum, Salam and Cable [4] have reported one case arising as a result of traction caused by the extrusion of a bone graft inserted in the cervical spine during cervical fusion operation. Kesing et al [5] reported Zenkers diverticulum to be an unusual site for significant upper gastro-intestinal haemorrhage following aspirin ingestion, because of the propensity for ingested tablets to lodge in the diverticula. Long standing Zenkers diverticulum can be a site for carcinoma [6]. Hence all excised specimens must be examined histopathologically. Bagatzoonis et al [7] reported an unusual presentation of lateral pharyngeal pouch as superior laryngeal neuralgia.

A number of problems are encountered during surgery. The first being location of the pouch. It looks large when filled with barium but in the empty state as it lies flattened between the oesophagus and the vertebral column often being adherent to the oesophagus, the whole structure seems one [8]. Therefore chances of recurrent nerve palsy are high. It is recommended that the pouch be packed using endoscope before dissection [9]. The second problem is the cramped conditions for suturing. Careful closure will avoid fistula formation and provided there is no mobilization of the cervical oesophagus and drain is put chances of mediastinitis are negligible. The diverticulum is as wide at the apex as at its junction with the pharynx, so has no real neck. If too much is pulled it can result in stenosis. Failure to perform a cricopharyngeal myotomy results in recurrence. The other method of resection is endoscopic which requires a special double lipped scope using carbon dioxide laser and a further modification is endoscopic staple oesophagodiverticulectomy [10,11]. The rate of complications by

these methods is lower. Surgical treatment of Zenkers diverticulum should be performed in symptomatic patients regardless of age [12]. Barium study is the best diagnostic tool but size can be misleading as an empty pouch is much smaller. Cricopharyngeal myotomy is the keystone in the surgical treatment.

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