

## Case Report

# Osteophyte compression mimicking a pharyngeal pouch!

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### ABSTRACT

Dysphagia is a broad term encompassing various symptoms due to any condition affecting the normal mechanism of swallowing. The symptoms are often varied like inability to swallow solids and/or liquids, cough on taking liquids, recurrent episodes of aspiration pneumonia and so on. Zenker's diverticulum is a not so common condition in which the patient usually presents with halitosis, delayed regurgitation of feeds in an unchanged manner and foreign body sensation in the throat. Another rare condition is an osteophyte indenting onto the esophagus and causing dysphagia. A 63 year old male presented to the laryngology out patient department with symptoms of food sticking in his throat and regurgitation of feeds in unchanged form which occurred hours after the initial meal. As clinical evaluation and flexible endoscopic evaluation of swallowing were unremarkable he was subjected to a fluoroscopy. Fluoroscopy showed prominent osteophytes at fourth cervical vertebra (C4) and seventh cervical vertebra (C7); the higher one obliterating the apex of right pyriform fossa thereby leading to occasional stagnation of barium in the right pyriform fossa which mimicked a pouch. A computed tomography confirmed the finding of an osteophyte compressing on the lower end of the hypopharynx and giving rise to symptoms similar to that of a pharyngeal pouch. He consequently underwent an osteophyte excision via anterior cervical approach following which he was relieved of his symptoms.

**Keywords:** Osteophyte, Pharyngeal pouch, Fluoroscopy, Dysphagia

### INTRODUCTION

Deglutology is a subdivision of laryngology wherein all kinds of swallowing disorders are dealt with in detail. A basic understanding of the normal mechanism of swallowing and the anatomical correlation is absolutely essential to treat a patient with dysphagia.<sup>1</sup>

Dysphagia is a broad symptom complex encompassing numerous causes right from a symptom as simple as reflux (globus hystericus) to as sinister as esophageal malignancies. Depending upon the etiology dysphagia is broadly classified as mechanical or neurological. Usually mechanical dysphagia is worse with solids while its neurological counterpart is worse with liquids.

The universal protocol in the evaluation of a dysphagia patient is a thorough history taking followed by clinical evaluation. Then depending upon the clinical scenario they are subjected to a flexible endoscopic evaluation of swallowing or a guided observation of esophageal stage of swallowing followed by a fluoroscopy wherever required. The fluoroscopy is currently the gold standard in the evaluation of swallowing disorders. Pharyngeal manometry, computed tomography (CT) scan and blood investigations may be warranted in some.

An osteophyte compressing over the esophagus usually presents with difficulty in swallowing solids, foreign body sensation throat, food sticking in the throat and delayed transit of solid foods.<sup>2</sup>

A patient with pharyngeal pouch usually presents with delayed regurgitation of feeds in an unchanged manner more so in the lying down position, halitosis, foreign body sensation throat, mild bulge in the neck, difficulty in swallowing solids when the pouch itself starts compressing the esophageal lumen and gurgling sound in the neck.<sup>3</sup>

But in our case the symptoms of the patient misled us into suspecting a pharyngeal pouch even though it turned out to be an osteophyte in an unusually higher location and creating a pouch out of the pyriform fossa.

### CASE REPORT

A 63 year old male reported to the laryngology out-patient department with complaints of throat block during sleep since the past 6 months. There was no associated hoarseness, dyspnoea or dysphagia. On further probing, the patient reported difficulty in swallowing certain foods like fruits and vegetables which will regurgitate back into his throat unchanged in lying down position even after many hours. However the symptoms were inconsistent in nature. The patient had a history of foreign body sensation throat after having a fish cutlet one year back for which he was managed symptomatically. The patient also reported past history of leaf-like food substances getting stuck in the throat for some time. The patient reported long standing reflux symptoms for which he had undergone atleast 6 gastro- endoscopies in the past and had been on continuous antireflux agents as per the suggestion of the gastroenterologist. There was no associated history of weight loss, cough on taking feeds, heart burns or fatigue. The patient was a diabetic for which he received oral hypoglycemic agents. There was no other significant past history.

Clinical examination revealed nothing significant. Act of swallowing on auscultation was found to be normal. The patient was then subjected to a transnasal esophagoscopy which was essentially normal. Because of the strong suspicion of a zenkers diverticulum, a fluoroscopy was planned.

Fluoroscopy revealed delayed passage of solids due to compression by osteophyte at the level of fourth cervical vertebra (C4) in the lateral view. No obstruction was noted with thin and semi-thick barium. Antero-posterior view revealed passage of bolus only through the left pyriform fossa; the right pyriform fossa acting like a pouch leading to accumulation of barium in it (Figure 1).

### Daignosis

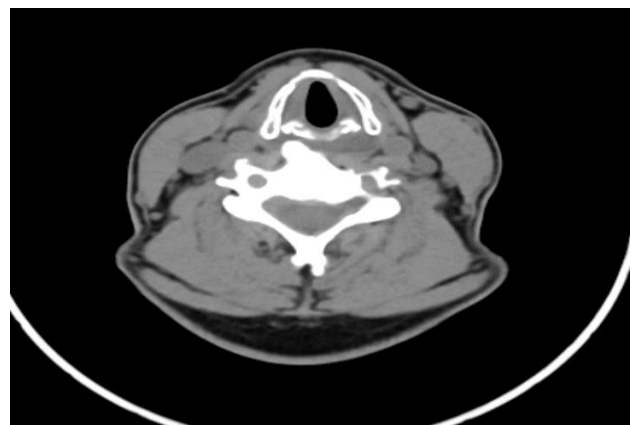
Hence it was concluded that the patient had an osteophyte at the level of C4-C5 which was obstructing the apex of the right pyriform fossa thereby turning it into a blind sac which would at time accumulate food and would be regurgitated hours later in an unchanged form (Figures 2 and 3).



**Figure 1: Stagnation of barium in right pyriform fossa (preoperative fluoroscopy).**



**Figure 2: CT image showing the osteophyte at the level of C 4 corresponding to the apex of the right pyriform fossa.**



**Figure 3: Preoperative X-ray neck lateral view.**

### Follow-up

The patient was duly referred to the spine surgeon for osteophyte excision. The procedure was done transcervically via anterior neck approach. The patient

remained asymptomatic when he presented for follow up after a period of 6 weeks (Figure 4).<sup>4,5</sup>



**Figure 4: Post-operative fluoroscopy neck lateral view.**

## DISCUSSION

Despite an extensive literature search on PUBMED database with the terms, dysphagia due to osteophyte compression mimicking a pharyngeal pouch, we were unable to find similar presentations.

The gold standard investigation for dysphagia evaluation is fluoroscopy.<sup>1</sup> But due to the need for a full fledged fluoroscopy machine, a trained medical personnel and the need to shift the patient to the fluoroscopy room; performing a fluoroscopy for every swallowing assessment is not always feasible. Hence the basic fiberoptic endoscopic evaluation of swallowing remains the mainstay of assessing swallowing.

Even though osteophyte compression causing dysphagia is seen in elderly patients, surgical intervention is not often required.<sup>4</sup>

Our case was unique for lot many reasons. First, the history was misleading as the main symptom was not dysphagia but regurgitation of feeds which made the gastroenterologist suspect severe reflux disease. So he was subjected to multiple endoscopies and was on anti-reflux therapy for many years. Second, before reaching our clinic the patient had never ever undergone a fluoroscopy even though multiple barium swallows and CT neck had been performed. These investigations helped in ruling out any obstructive lesion, zenkers diverticulum and motility disorder. Third, a high osteophyte impinging on the

cricopharynx thereby obstructing one of the pyriform fossa and in turn turning it into a blind pouch was an unusual finding in itself.

## CONCLUSION

For every dysphagia patient, a thorough history taking is of utmost importance. And at times the diagnosis might be missed inspite of multiple barium swallows. Hence, we would recommend a fluoroscopy unit in every dysphagia clinic in addition to barium studies.

## Recommendations

Even though flexible endoscopic evaluation of swallowing is the most commonly used procedure for dysphagia assessment, fluoroscopy remains the gold standard for completion of a comprehensive evaluation.

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