CASE REPORT

Cervical osteoarthropathy: an unusual cause of dysphagia

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Abstract

Presentation: a 72-year-old man complained of progressive dysphagia for solids associated with a sensation of foreign body in his throat for 2 years. A barium swallow showed a bridging osteophyte between C4 and C5 vertebrae indenting the oesophagus posteriorly and displacing it anteriorly.

Outcome: he refused surgical intervention and was given dietary advice. After 6 months, his weight was steady and he was able to swallow semi-solid food without difficulty.

Keywords: cervical osteophytes, dysphagia, elderly

Introduction

Although asymptomatic, hypertrophied spurs of the anterior margins of the cervical vertebrae are common [1]; dysphagia secondary to compression of the oesophagus by these spurs is unusual.

Case history

A 72-year-old man complained of progressive dysphagia for solids associated with a sensation of foreign body in his throat for 2 years. There was no dysphagia for liquids. He had not lost weight and continued to have a good appetite. There was no previous history of trauma to the neck or whiplash. On examination, he was well nourished. Examination of the neck revealed no goitre, and neck movements were good in all directions. General examination was unremarkable. Routine blood tests were normal.

A barium swallow (Figure 1) showed a bridging osteophyte between C4 and C5 vertebrae indenting the oesophagus posteriorly and displacing it anteriorly. There was also a sliding hiatus hernia. Cervical and thoracolumbar spinal x-rays showed no other large osteophytes. Fibre-optic endoscopy of the pharynx, oesophagus and stomach was normal.

He refused surgical intervention and was given dietary advice by the nutritionist.

Six months later, his weight was steady and he was able to swallow semi-solid food without difficulty.

Discussion

Dysphagia may have oro-pharyngeal or oesophageal causes [2]. Oro-pharyngeal dysphagia in elderly patients is often caused by neurological conditions, especially stroke.

Local structural lesions leading to dysphagia include oro-pharyngeal tumours, thyromegaly, abscess and webs as well as cervical osteoarthritis with vertebral osteophytes. The differential diagnosis of anterior vertebral osteophytes includes diffuse idiopathic skeletal hyperostosis (DISH) and ankylosing spondylitis [3]. The DISH syndrome is characterized by large osteophytic spurs or bony proliferation in the form of anterior osseous bridges with thickening of the corresponding vertebral cortex. In this case the localized complete bridging osteophyte between C4 and C5 with no evidence of osteophyte formation in the thoracic and lumbar vertebrae, were not in keeping with DISH syndrome or ankylosing spondylitis.

In elderly patients cervical osteoarthropathy may cause dysphagia when the osteophytes are extraordinarily large and occur in the cricoid cartilage region (where the oesophagus is relatively immobile) or when peri-oesophagitis occurs secondary to rapid expansion of the osteophyte [4]. Typically, osteophytes causing the dysphagia are in the C5 cervical interspace. Anterior protrusion of cervical osteophytes in front of the cervical vertebrae can cause hypopharyngeal compression, which is sensed by the patient as a lump in the throat.

Cervical spine x-rays and barium swallow confirm
the presence of cervical osteoarthropathy. Extending the neck and swallowing a barium-coated marshmallow to reproduce dysphagia during barium swallow are useful measures to confirm the obstructive nature of the osteophytes [5]. Videofluoroscopy is helpful in showing the sequence of muscular changes needed to transfer ingested material from mouth to upper oesophagus and ruling out neuromuscular causes of dysphagia. The importance of the speech and language therapist and the nutritionist in assessment and interdisciplinary management of oro-pharyngeal dysphagia is well documented [6, 7].

Patients are often inaccurate in localizing the level of their dysphagia [4]. A patient with severe dysphagia who underwent surgical resection of the anterior cervical osteophyte impinging on the oesophagus failed to improve postoperatively, and was subsequently diagnosed as having a carcinoma at the base of the tongue [8]. Cervical osteophytes should therefore not be accepted as the reason for the patient’s symptoms until other causes have been excluded.

Although some clinicians recommend pharyngoscopy, caution must be exercised during this procedure. Oesophageal perforation in patients with cervical osteophytes has been reported after oesophagoscopy [9]. As patients with gastro-oesophageal reflux may complain of dysphagia in the neck region [10], manometric and pH stimulation studies help to exclude motility disorders and gastro-oesophageal reflux.

Most patients can be managed conservatively with a team approach which ensures the dysphagic patient receives detailed assessment and rehabilitation of the swallowing disorder [11]. Surgical excision is appropriate in selected patients whose symptoms are severe and progressive [12, 13]. Prognosis in dysphagia associated with cervical spine is uncertain, as few case reports include adequate follow-up. However, in most cases there is a gradual progression of symptoms [4].

### Key points
- Consider cervical osteoarthropathy as an important though uncommon cause of dysphagia in older people.
- Cervical osteoarthropathy can be diagnosed by cervical spine x-rays or a barium swallow.
- Cervical osteophytes should not be accepted as the cause of dysphagia until other causes have been excluded.
- If the dysphagia is severe and fails to resolve with conservative measures, surgery can be effective.

### References

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