Neuroradiology (1995) 37: 58–59

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Dysphagia caused by an anterior cervical osteophyte: case report

Received: 1 December 1993
Accepted: 30 December 1993

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Abstract Cervical spondylosis and ankylosing hyperostosis of the cervical vertebrae are commonly asymptomatic. Dysphagia caused by cervical osteophyte formation is rare. We report a case of spondylotic dysphagia with striking radiographic findings. A massive anterior cervical hyperostosis was resected via the anterior cervical approach with excellent relief of dysphagia.

Key words Cervical spondylosis · Dysphagia · Ankylosing hyperostosis

Introduction

Ankylosing hyperostosis, or diffuse idiopathic skeletal hyperostosis (DISH), first described by Forestier and Rotes-Querol in 1950 [1], is a noninflammatory stiffening disease of the spinal column due to extensive bone formation, which often causes complete bridging of adjacent intervertebral spaces. Compression of the oesophagus, larynx, and trachea caused by cervical bony hypertrophic changes is very rare. Among patients with DISH, 17% have dysphagia [2], while 28% of those with cervical osteophytes complain of dysphagia [3]. Le Roux [4] reviewed plain radiographs in 1200 patients with dysphagia but did not report anterior osteophytes in any of them. We describe a patient presenting with spinal spondylotic dysphagia.

Case report

A 60-year-old man with painless dysphagia and snoring was referred to our hospital. The patient had difficulty swallowing solids, continuous nonproductive cough, inspiratory stridor, and nocturnal snoring, so loud that it woke the patients on the floor above. There were no symptoms of aspiration, or of pain or stiffness of the neck. The patient was alert, afebrile, and well-oriented, with stable vital signs. The neck showed slight decrease in mobility, but no mass was evident. A prominent indentation on the posterior hypopharynx was observed with a flexible laryngofibroscope. Other examination and laboratory findings were unremarkable.

A lateral radiograph of the cervical spine showed extensive anterior osteophyte formation (Fig. 1). A cervical myelogram showed no compression of the cervical spinal canal, and plain film examination of the thoracic and lumbar spine revealed mild ossification of the anterior thoracic spine.

Surgery was carried out via an anterior approach, and the postoperative film (Fig. 2) showed complete removal of the anterior osteophyte. Ten days after surgery, the patient was free of symptoms.

Discussion

Forestier and Lagier coined the term diffuse idiopathic skeletal hyperostosis (DISH), sometimes called "Forestier's disease", in 1971 [4, 5]. It is more frequent in men, and the onset of symptoms is after the age of 50 years. DISH has the following distinguishing radiological features [4, 6]: the bony osteophytic bridges are continuous with the anterior vertebral cortex; the anterior longitudinal ligament is partially integrated into the bony proliferations at the level of the vertebral edges and in front of the disc spaces; the vertebral cortex is thickened but rarely associated with osteoporosis; the disc spaces are

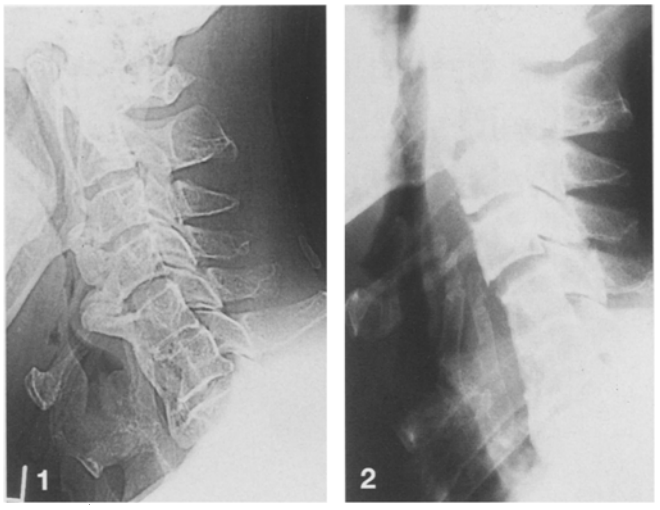

Fig. 1 Lateral cervical spine radiograph. A small spur at C3, a large spur anteriorly at C3–4, and a very large osteophytic prominence at C4–5 are seen. Note distortion of the Supraglottic air shadow

Fig. 2 Postoperative radiograph. Complete decompression of the laryngopharynx is seen

normal in height and the vertebral plates are regular in appearances; the apophyseal joints are not involved, and no ossification is present on the posterior surface of the vertebral bodies at the disc spaces. Examination may reveal diminished spinal movements in patients in whom the bony bridges are more extensive. Cervical osteophytes are associated with the disease. The C5–6 vertebral level is involved in 40 % of cases, C4–5 in 23 %, and C2–3 and C3–4 each in approximately 14 % [7].

According to Resnick and Niwayama [3], dysphagia is present in about 17 % of patients with DISH, but only 8 % require surgical removal of bone. Although impingement on the oesophagus by overgrowth of cervical osteophytes can be gradual, symptoms may occur suddenly. They are caused by simple mechanical compression and/or inflammation of adjacent soft tissue and distortion of the larynx and/or laryngeal cartilages by the bony mass and spurs. Laryngotracheal symptoms occasionally consist of dysphonia and a nonproductive cough, in addition to the dominant complaint of dysphagia. Respiratory distress is rare. Sanders [8] reported a case of respiratory failure and death due to osteophytic compression of the trachea.

Our case is exceptional because of the extremely loud nocturnal snoring and the inspiratory stridor; this can be a cause of respiratory arrest. Surgical excision of the osteophytic masses was selected as treatment, and proved clinically and radiologically effective.

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