DYSPHAGIA SECONDARY TO ANKYLOSING HYPEROSTHOSIS

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SUMMARY :

A 59-year-old man presented with a one-year History of progressive dysphagia to the point that he could no longer swallow solid foods. Cervical spine X-Ray films demonstrated massive anterior new bone formation along the anterior surface of C3 to C7 vertebrae. Evaluation with barium swallow and cervical computed tomograhpy demonstrated oesophageal compression. Resection of the anterior onteophytes resolved the dysphagia.

KEY WORDS :

Cervical spine, Dysphagia, Osteophytic Disease

INTRODUCTION

Forrestier's disease or Ankylosing Hyperosthosis (AH) is a common clinical entity of unknown aetiology seen in middleagen and elderly patients. It is associated with a flowing ossification along the anterior surface of the vertebrae extending to the disc spaces in a distinctive fashion. Dysphagia is found in relation with anterior block fusion and remodelling of several segments figuring as outgrowths from the ventral surface of the cervical spine (10,12). Recently we encountered a case of dysphagia secondary to AH. The following case report and review of the pertinentliterature present information for the diagnosis and management of this condition.

CASE REPORT

A 59-year-old man presented with a one-year history of progressive difficulty in swallowing solid foods. The patient's medical history included adult Type II D.M. that was well controlled by Glibornuride and low calory diet. Neurological and general physical examination revealed that he was unable to swallow solid foods if not assisted by liquid intake. Lateral cervical spine X-Ray films demonstrated severe anterior new bone formation and exosthosis with candlelight-like appearance from C3 to C7.

The posterior longitudinal ligament was ossified at C5-C6 level. The facet joints were normal. Results of barium swallow and computed tomograhpy (CT) cofirmed the diagnosis of oesophageal compression (Fig 1-A, 2,3-A). The osteophytic spurs of the anterior cervical spine were excised and removed via a right anteriolateral incision parallel to the anterior border of the sternocleidomastoid muscle. The soft tissues

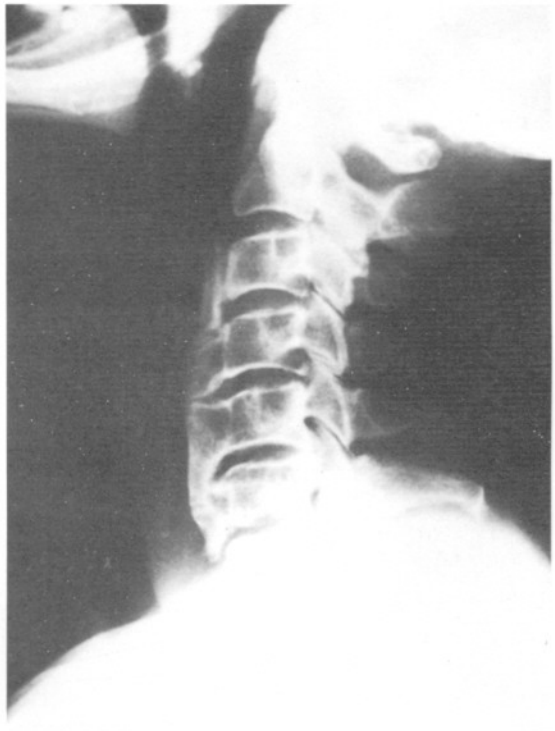

Fig 1-A: Lateral cervical spine X-Ray films demonstrate florid anterior new bone and exosthosis formation from C3 to C7.

were retracted with Cloward retractors and a high speed drill was used to remove the osteophytes. The excised specimens consisted of several aggregates of irregular bony tissues measuring minimum 0.7×0.5×0.3 cm and maximum 2.5×1×0.5 cm. Postoperatively, the patient took oral fluids within 24 hours and ate solid foods comfortably after 72 hours.

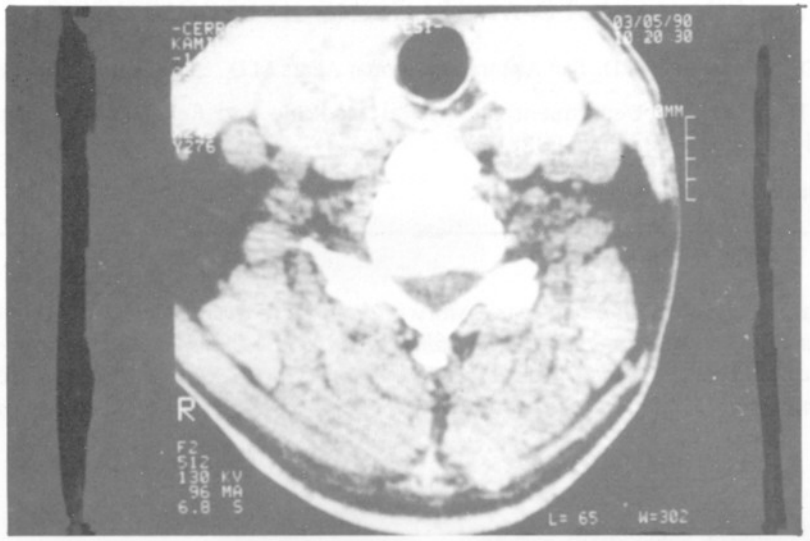

Fig 2 : Computerised tomography shows anterior bone apposition anterior to C5 vertebra.

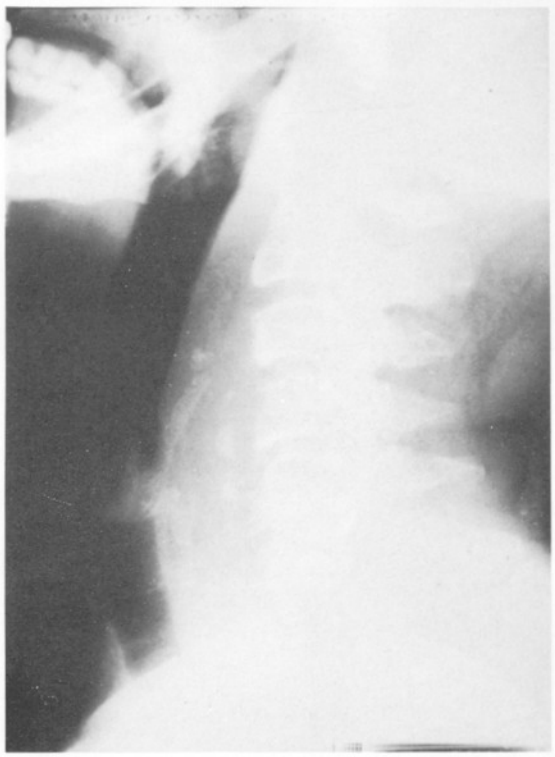

Fig 1-B : Postoperative X-Ray films show normal alignment of cervical vertebrae.

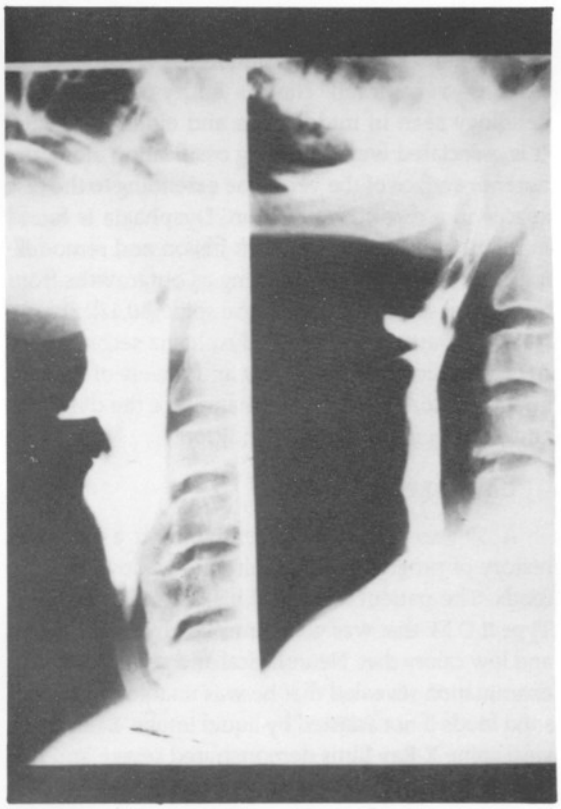

Fig 3 A+B : Barium swallow examination indicates oesophageal compression and delayed passage. Postoperative examination demonstrates normal oesohhageal passage.

Pathological examination of the specimens revealed regular trabecular and cortical bone tissue. Postoperative X-Ray films demonstrated normal alignment and no instability. Postoperative barium swallow confirmed a normal oesophageal passage (Fig 1-B, Fig 3-B)

DISCUSSION :

The causes of dysphagia are varied and include caustic strictures, oesophagitis, cardiospasm, oesophageal motility disorders, oesophageal diverticula, aberrant vessels, Plummer-Vinson Syndrome, cervical spine diseases and benign and malignant tumours of themediastinum, oesophagus, larynx and spine (1). Among the cervical spine diseases causing dysphagia are the congenital bony bars, atlantoaxial dislocation, anterior protrusion of calcified cervical disc, fracture, tumour and degenerativediseases of the vertabrae including cervical spondylosis, ankylosing hyperosthosis and osteophytic spurs (2,3,4,5,6,8,11). The dysphagia secondary to osteophytic disease has been reported to occur predominantly in men at a mean age of 62 years. The most common spinal level of osteophyte formation was found to be C5,C6. Involvement of spinal level C3,C4 and C6,C7 was less frequent (9). Symptoms of cervical osteophytes include difficulty in swallowing, a foreign body sensation in the throat, dyspnea, weight loss, and pain or numbness in the shoulder, arm or hand (12). Three mechanisms of compression of the oesophagus predisposing dysphagia have been described. A large size osteophyte may cause mechanical blockage. Small ostoephytes at fixed points of the oesophagus (which are the cricoid cartilage level (C6 level) and the site where the oesophagus passes through the diaphragm) may cause dysphagia. Finally inflammatory reaction in the soft tissues surrounding the oesophagus due to osteophytes may result in swelling and dysplagia (1). Cervical osteophytic diease can be diagnosed by the visualisation of a hard mass posterior to the pharynx by conventional X-Ray and barium swallow examination. CT. Oesophagoscopy but there is a danger of oesophageal perforation (1). Other causes of dysphagia must be ruled out. Patients with dyspagia due to osteophytes are first instructed to chew food thoroughly, if dysphagia continues they are encouraged to eat soft foods (12). In severe cases of dysphagia surgical excision of the offending bone mass is required (1,12). A transoral approach has been suggested for high cervical lesions, whereas mid-and low cervical lesions require a standard anterior external approach to the cervival spine. The major risks of the external approach include vocal cord paralysis and perforated oesophagus. Horner's syndrome may occur if the carotid sheath is retracted medially rather than laterally (1). In many cases surgical excision of the osteophyte was taking oral fluids within 24 hours and was asymptomatic in one week.Re-ossification can occur in a long term follow-up, but may be asymptomatic. There is no treatment to prevent re-ossification(1).

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