Aspiration Pneumonia Secondary to Giant Cervical Osteophyte Formation (Diffuse Idiopathic Skeletal Hyperostosis or Forrestier's Disease)*

A Case Report

Marta Babores; and J. P. Finnerty, MBBS

An 80-year-old man was admitted to the hospital with recurrent right-sided aspiration pneumonia, found on barium swallow to be due to diffuse idiopathic skeletal hyperostosis (Forrestier's disease) of the cervical spine, with the formation of a giant cervical osteophyte. He was treated conservatively with a feeding gastrostomy. The medical literature concerning this unusual cause of dysphagia and aspiration pneumonia is reviewed.

(CHEST 1998; 114:1481–1482)

Key words: aspiration pneumonia; Forrestier's disease

An 80-year-old man who was first examined for recurrent pneumonia exhibits a case of diffuse idiopathic skeletal hyperostosis (Forrestier's disease) of the cervical spine along with the formation of a giant cervical osteophyte. Treatment is delineated, and the medical literature regarding this unusual cause of aspiration pneumonia is reviewed.

*From the Department of Medicine, Countess of Chester Hospital, Liverpool Road, Chester CH2 1UL, England.
Manuscript received March 26, 1998; revision accepted April 8, 1998.
Correspondence to: J. P. Finnerty, MBBS, Consultant Respiratory Physician, Department of Medicine, Countess of Chester Hospital, Liverpool Road, Chester, England CH2 1UL; e-mail: JFINNER@AOL.COM

CASE REPORT

An 80-year-old man was admitted to Countess of Chester Hospital on June 6, 1997, with a short medical history of confusion and malaise. He had been observed to have developed a cough which had persisted for several months. The cough had been productive of clear phlegm, and there had been no hemoptysis. A diagnosis had been made of a deep venous thrombosis of the leg 2 months previously, and the patient was receiving warfarin sodium orally at the time of admission; he was receiving no other medications.

On examination, his temperature was 38.8°C, with a tachycardia of 104 beats per minute, and there were coarse inspiratory crackles not clearing on coughing heard at the right lung base. His chest x-ray film showed patchy consolidation in the corresponding area at the right lung base.

He was treated with intravenous antibiotics and his condition improved over the next few days. After 5 days, the antibiotics were discontinued; he deteriorated again, again with signs of sepsis, and he developed recurrent chest signs at the right lung base. The nursing staff reported that he was coughing when trying to swallow, and in view of this, aspiration was suspected and a barium swallow was arranged. This showed diffuse idiopathic skeletal hyperostosis involving the bodies of C-2, C-3, and C-4, with large osteophytes projecting anteriorly and displacing the pharynx anteriorly (Fig 1). The esophagus underwent a virtual hairpin bend, and the barium was mechanically directed onto the epiglottis, and there was evidence of barium aspiration.

The patient's case was discussed with the local neurosurgeons who felt that his frailty precluded surgical intervention. A percutaneous feeding gastrostomy tube was endoscopically inserted, and the patient has been free of chest infections since that time (more than 3 months), and his condition has been medically stable.

DISCUSSION

Although cervical spondylosis is a common disorder, aspiration due to osteophyte formation rarely has been reported. The case reported here was believed to represent a case of Forrestier's disease, which is an idiopathic disorder principally of elderly men, characterized by exuberant ossification along ligaments, predominantly the anterior longitudinal ligament of the spine.1 It usually is asymptomatic but has been reported as causing dysphagia and cord and nerve entrapment, as can cervical spondylosis with osteophyte formation.2 It often is treated surgically when symptomatic, but there is significant associated morbidity and mortality, and conservative management can be successful.2 Cervical spinal abnormalities causing mechanical respiratory problems are rare. Hassard3 reported two cases of this disease; these patients developed laryngeal edema and vocal cord paralysis and were treated with tracheostomy and surgical excision of osteophytes. Davies et al4 reported two cases of cervical osteophyte-induced dysphagia in which barium studies indicated tracheal aspiration due to deformity at the laryngeal inlet.

This reported case was unusual in that the patient had not reported dysphagia and had major problems with aspiration leading to recurrent right-sided chest infection. His successful treatment with a feeding gastrostomy tube indicated that although the mechanical problem remained, the persisting aspiration of saliva that he must have had was not sufficient to cause problems with infection. A major current respiratory textbook omits
cervical spinal disease from its list of differential diagnosis of aspiration pneumonia. This case illustrates that spinal abnormalities, such as diffuse idiopathic skeletal hyperostosis, albeit rare, should be included in such a list as potentially treatable causes.

REFERENCES

Therapeutic Digoxin Level in Chylosal Drainage With no Detectable Plasma Digoxin Level*

Mark D. Taylor, MD; Song Soon Kim, PharmD; and Lydia J. Vaajas, MD

A patient receiving digoxin for long-standing congestive heart failure developed a chylothorax following removal of an infected aortic graft. Drainage of the chylothorax resulted in plasma digoxin concentrations which were near zero while the digoxin levels in the chylosal drainage fluid were therapeutic. The sequestration of even low lipid-soluble drugs, such as digoxin, in chyle should be recognized to prevent subtherapeutic plasma levels in patients undergoing chylothorax drainage.

(CHEST 1998; 114:1482–1484)

Abbreviations: JP = Jackson-Pratt

The dosage of digoxin administered to patients with chylothorax undergoing chylous drainage or those experiencing accumulation in the chest or abdomen must be carefully monitored by health care providers.

CASE REPORT

A 75-year-old white male patient was admitted to Long Beach Veterans Administration Hospital on August 24, 1997, for treatment of an infected aortic bi-iliac prosthetic graft. The patient underwent bilateral axillary femoral bypass on September 11, 1997, with removal of the aortic bi-iliac graft 5 days later. A Jackson-Pratt (JP) closed suction drain was placed into the left retroperitoneum for postoperative drainage. The patient’s past medical history included insulin-dependent diabetes mellitus, hypertension, and congestive heart failure. His past surgical history included an abdominal aortic aneurysm repair with aortic bi-iliac graft placement in 1993; this was complicated by T-11 paraplegia, ischemic bowel, and obstructive hydrenephrosis requiring colostomy and bilateral nephrostomy tubes at another institution. On admission, his medications included digoxin 0.25 mg po daily, NPH (intermediate acting) insulin, felodipine, bacloden, dantrolene sodium, and furosemide (Lasix). The patient’s postoperative creatinine clearance calculated from the Cockcroft and Gault equations was 32 mL/min. Based on this creatinine clearance, the patient’s postoperative digoxin dosage was decreased to 0.125 mg po qd. Following surgery, the patient began receiving peripheral parenteral nutrition for a period of 7 days. During this period, digoxin was administered orally with sips of water; the digoxin level was maintained above 0.8 ng/mL. The gut appeared functioning for digoxin absorption. On post-

*From the Long Beach Veterans Administration Hospital, Department of Surgery, University of California in Irvine School of Medicine.
Manuscript received January 28, 1998; revision accepted May 19, 1998.
Correspondence to: Song Soon Kim, PharmD, Long Beach Veterans Administration Hospital, Department of Surgery, 5901 E. 7th Street, Long Beach, CA 90822