Hypertrophic osteoarthropathy: two unusual causes

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Summary

Two patients with hypertrophic osteoarthropathy of unusual aetiology are described. The first patient developed the condition in association with oesophageal carcinoma and the second as a complication of active pulmonary tuberculosis. In the second case, substantial resorption of new bone was seen following treatment.

KEY WORDS: osteoarthropathy, tuberculosis, carcinoma, oesophagus.

Introduction

Unusual causes of hypertrophic osteoarthropathy (HOA) have previously been reported from this centre (Carroll and Doyle, 1974). We wish to record two further cases; one of these, oesophageal carcinoma, although rare, is a well known cause while the other, pulmonary tuberculosis, has not been recognised before.

Case reports

Case 1

A 54-year-old woman complained of dysphagia, anorexia and weight loss. Barium studies were initially normal. Two months later, she developed clubbing of the fingers and toes and complained of pain and swelling of the knee and ankle joints.

Radiological studies showed periosteal new bone deposition at the lower ends of the femoral shafts typical of hypertrophic osteoarthropathy (HOA). A second barium series showed a filling defect in the lower third of the oesophagus and a polypoid tumour was seen at oesophagoscopy. Cardio-oesophagectomy was carried out. Histology showed a well differentiated squamous cell carcinoma. Following resection, the symptoms of osteoarthropathy rapidly resolved and the clubbing partly regressed. Four months following surgery, she died from extensive abdominal metastases and ascites. There was no recurrence of the HOA.

Case 2

A 41-year-old man complained of productive cough, weight loss and malaise of two months duration. There was mild finger clubbing. Chest radiograph showed extensive bilateral mottling and the sputum was positive on direct smear for tuberculosis. A standard triple chemotherapy regime was commenced. After two months, he complained of pain and swelling of the ankles, knees, wrists, elbows and fingers and had developed much more obvious finger clubbing. Radiological studies were normal at the onset of these symptoms but later showed typical appearances of HOA involving a number of long bones including the metatarsals, particularly the fifth (Fig. 1). After a further two months of treatment, the

FIG. 1. Metatarsal periosteal new bone formation in a patient with pulmonary tuberculosis.

chest X-ray appearances had improved satisfactorily and there was regression of HOA symptoms and also radiological evidence of resorption of the new bone. Further investigations, including whole lung tomography and bronchoscopy, failed to demonstrate a lung neoplasm.

Discussion

Typically, HOA is associated with bronchial carcinoma and especially the peripheral type of primary tumour. It is known to occur in association with a number of other neoplasms and benign conditions arising in the territory of distribution of the vagus nerve. Oesophageal carcinoma is known to cause HOA occasionally (Coury, 1962; Carroll and Doyle, 1974; Maurice-Williams and Wilson, 1969; Peyman, 1959). An association with pulmonary tuberculosis has been described in the Siberian tiger in a single case report (Van de Watering, Zwart and Bakker, 1972), but not in man. Bronchiectasis is however the commonest benign association and may well be the cause in this patient (Case 2), particularly since HOA

developed when the radiological changes of active infection had started to resolve. The metatarsal radiographs show the predominant involvement of the fifth metatarsal, previously described by Doyle (Carroll and Doyle, 1974), and also demonstrate that the new bone may eventually resorb following regression of the clinical features.

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(Accepted 30 July 1982)