Osteolytic bone lesions in a patient with idiopathic myelofibrosis and bronchial carcinoma

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Abstract
A 59 year old man with longstanding myelofibrosis and previous splenectomy was incidently found to have a large lytic lesion in his left femur which required operative fixation. He had undergone right upper lobectomy for squamous carcinoma of the bronchus five years earlier. Histological analysis of bone reamings showed no evidence of metastatic carcinoma. Osteosclerosis is frequently noted in patients with myelofibrosis but osteolytic lesions are uncommon and may be confused with metastatic malignancy.

(Keywords: Myelofibrosis, bronchial carcinoma, osteolytic lesions)

Case report
A 59 year old man with stable myelofibrosis of 33 years duration presented acutely unwell with bilateral pneumonia, congestive cardiac failure and acute renal failure. He required intensive supportive care including mechanical ventilation, diuretics, inotropes, and intravenous broad spectrum antibiotics. Bronchial washings grew enterococci on culture. Pneumococcal antigen was negative. He made a slow recovery. During his recovery, the patient complained of weakness and paraesthesia in his left leg. He was found to have a flaccid paralysis of the left foot with absent ankle jerk and plantar reflex and sensory loss of all modalities below the knee.

An x ray of the left femur showed a lytic lesion occupying the mid and lower third of the shaft of the bone with extensive endosteal scalloping (figure). A bone scan showed increased uptake of the isotope at the diaphysis of the femur consistent with a metastatic malignancy or primary bone tumour. As there was thought to be significant risk of fracture through this lesion, intramedullary nailing of the bone was performed. Reamings taken from the femur were examined histologically and found to contain macrophages, lymphocytes and haemopoietic cells but there was no evidence of malignancy. Following surgery, the patient made a good recovery. Nerve conduction studies showed changes attributed to critical illness polyneuropathy.

His past medical history included splenectomy at the age of 45 for massive splenomegaly after several painful splenic infarcts, and a right upper lobectomy for squamous carcinoma of the bronchus when aged 55 years. A skeletal survey during this admission showed an abnormality of the bony trabecular pattern in the head of the left humerus, thought to be due to fibrous dysplasia, previously noted in 1960 at which time no abnormality of the left femur was reported. No bone scan was done at the time of lung resection.

Six months later, despite regular post splenectomy prophylaxis with penicillin V, the patient developed a fatal pneumococcal pneumonia and septicaemia. A postmortem examination was not performed.

Discussion
Idiopathic myelofibrosis is a chronic myelo proliferative disorder characterised by narrow
fibrosis, splenomegaly and a characteristic appearance of the peripheral blood. Extramedullary haemopoiesis occurs, most commonly in the liver and spleen and less frequently in a variety of other sites.

Bone changes are a characteristic feature of myelofibrosis. Osteosclerosis occurs in 40 to 70%1-3 of patients and the combination of osteosclerosis and splenomegaly is strongly suggestive of myelofibrosis.4 Osteolytic lesions, however, are much less common. Osteolytic lesions are frequently diffuse and may be painful.12 Reported cases have been pre-