**LETTERS**

**Weight loss with purpura and pain at the distal femora**

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Paraneoplastic syndromes may occur as the first clinical symptom at an early stage of malignant diseases in about 7–10% of cases. As presented here, intensive investigations may be necessary to uncover an early curable tumour.

**CASE REPORT**

A 72 year old man presented with multiple purpuric and necrotising skin eruptions (sized 2–20 mm) covering mainly the extremities and, to a lesser extent, the trunk. He had noticed a weight loss of 12 kg in the past 2 months. There was a history of smoking with chronic obstructive pulmonary disease and partial colectomy because of a benign adenoma. Laboratory investigations showed a normal erythrocyte sedimentation rate (9 mm/1st h), but C reactive protein was raised (43 mg/l). Serological markers, such as antinuclear antibodies, antineutrophil cytoplasmic antibodies, cryoglobulins, and hepatitis B and hepatitis C were excluded. A diagnostic procedure was performed to exclude a neoplasm, but, chest radiography, abdominal ultrasonography, gastroscopy, and colonoscopy were normal. Prednisone was prescribed. Ultrasound and plain radiography showed changes consistent with hypertrophic osteoarthropathy. Bone scan and computed tomography confirmed abnormality at the distal femoral bone.

Figure 1  (A) Musculoskeletal ultrasound demonstrated an echogenic irregular focus above the surface of the distal femoral bone with distal acoustic shadowing (longitudinal scan). (B) Plain radiography of the right femur disclosed smooth, lamellated periosteal new bone formation, consistent with hypertrophic osteoarthropathy. (C) A bone scan showed irregular increased uptake involving the distal femur bilaterally. (D) Computed tomography of the chest showed a small mass at the right lung.
given at a dose of 1 mg/kg body weight, with gradual improvement of the cutaneous vasculitis.

During the residential period the patient complained of pain in the region of the distal femur and the ankle bilaterally. Musculoskeletal ultrasound of the knee joints showed an effusion of 6 ml from the right and 3 ml from the left, without signs of synovitis, but discrete osteophytes. However, at the surface of the distal femoral bone echogenic irregular foci bilaterally with distal acoustic shadowing were seen, suggesting periosteal calcifications (fig 1A). An x ray examination confirmed symmetric periostial reactions of the femora of both sides (fig 1B), compatible with periostitis. Inflammatory activity was shown by a significant enhancement of unexplained vasculitis or periostitis, or both, even if standard chest radiography of the lung should be performed in the presence of unexplained vasculitis or periostitis, or both, even if standard chest radiography of the lung shows no pathological findings.

**DISCUSSION**

Our patient presented with two paraneoplastic syndromes: hypertrophic osteoarthropathy and cutaneous vasculitis.

Hypertrophic osteoarthropathy is most commonly seen in Pierre-Marie-Bamberger’s syndrome. This syndrome is characterised by the concurrence of clubbed fingers, arthralgia, and painful periostitis of the extremities, and occurs in pulmonary, cardiac, hepatic, or intestinal diseases.2 Rarely, periostitis may be the only manifestation of Pierre-Marie-Bamberger’s syndrome3 as in our patient. The periostitis is the result of subperiosteal bone formation, occurring mainly on the distal diaphysis of the long bones. Effusions into the large joints with little inflammatory cell exudation are a frequent finding. The diagnosis of periostitis is usually made by radiography and by bone scan. As we showed, musculoskeletal ultrasound may also visualise periostitis, but it is needed especially to look for periosteal lesions far from the adjacent joints. Table 1 presents other conditions associated with periostitis.

Non-small lung cell cancer is the most common malignancy associated with both Pierre-Marie-Bamberger’s syndrome and cutaneous vasculitis.4,5 However, hypertrophic osteoarthropathy is more common (4.9% in one study) than paraneoplastic vasculitis in patients with lung cancer.6,7 Differential diagnosis includes polyarteritis nodosa and systemic lupus erythematosus; both have been associated with periosteal reactions and vasculitis in anecdotal reports.8,9 However, as demonstrated by our case, computed tomography of the lung should be performed in the presence of unexplained vasculitis or periostitis, or both, even if standard chest radiography of the lung shows no pathological findings.

**REFERENCES**