the medial aspect of the upper tibia (Fig. 1b), with associated synovitis in the pes anserinus bursa. A biopsy of the tibial tubercle was obtained in view of the possibility of low-grade infection. This showed bone and inflammatory fibrous tissue consistent with chronic inflammation, but no evidence of malignancy. The patient was then put on a prolonged course of antibiotics, which led to some symptomatic improvement.

In 1993 he re-presented with pain and swelling over the tibial tubercle, and when seen in the clinic it was noted that he had an erythematous scaly rash on his lower leg, diagnosed as a herald patch of psoriasis. Psoriasis was confirmed by skin biopsy and was treated with topical steroids. Symptoms in his leg increased progressively, and the periosteal reaction became more extensive on the medial and posterior aspect of the tibia, again raising the possibility of malignancy (Fig. 2a and b). MRI demonstrated the periosteal new bone and oedema, but there was no associated soft tissue mass. In view of the histological findings of the previous bone biopsy, a decision was made not to repeat this, and to monitor the bone lesions by clinical examination and radiological imaging. A provisional diagnosis of tumoral enthesopathy due to psoriasis was made, despite the fact that the patient never developed psoriatic arthritis or other rheumatological problems.

Rheumatology 2001;40:342–344

Tumoral enthesopathy in psoriasis

Sir, The rheumatological manifestations of psoriasis have been well documented, and bone proliferation is a common feature. In some cases the new bone formation can be impressive, mimicking malignancy, and the term ‘tumoral enthesopathy’ has been coined to reflect this. Few cases have been reported in the literature, and all have occurred in association with established psoriatic arthritis. In our patient, the tumoral enthesopathy developed before the patient had any dermatological or rheumatological manifestation of psoriasis.

A 44-yr-old man presented in 1989 with a 9-month history of a painful lump in his right knee over the tibial tuberosity. There was no relevant history of trauma or systemic illness. Examination was normal apart from slight thickening and tenderness over the tibial tuberosity. Radiographs of the tibia were relatively normal, but a bone scintigram showed increased activity in the region of the tibial tubercle. No abnormal uptake was seen elsewhere in the skeleton. A diagnosis of infection or neoplasm was considered, but the patient’s symptoms subsided and no further action was taken.

His symptoms recurred 18 months later, requiring further investigation by plain films, scintigraphy, computed tomography (CT) and magnetic resonance imaging (MRI). Plain films revealed a mature periosteal reaction on the anterior aspect of the tibial tubercle, confirmed on CT (Fig. 1a). The MRI scan also demonstrated oedema in the overlying soft tissues and along

![CT and T1-weighted MRI](image-url)

Fig. 1. CT (a) and axial T1-weighted MRI of the right knee demonstrating thickening of bone on the anterior aspect of the tibial tubercle and oedema in the overlying soft tissues (arrows).
The patient’s symptoms gradually improved, and later films showed the periosteal reaction to be maturing, supporting the diagnosis of tumoral enthesopathy.

Symptomatic psoriatic enthesopathy occurs in approximately 19% of patients with psoriatic arthritis, usually in the lower limbs around the involved joints. There is typically a combination of bone erosion and bony hyperproliferation, particularly at ligamentous and tendinous insertions [1, 2]. This may precede the development of skin changes, as in our case, but is almost always associated with psoriatic arthritis. The associated periosteal reaction has been described as linear, fluffy or woolly, and is usually uniform. The degree of new bone formation can occasionally be striking, when it has been described as ‘tumoral enthesopathy’.

The group of tumours which may cause diagnostic confusion are the juxtacortical osteosarcomas, which have been classified into paraosteal, periosteal and high-grade surface types. It is the periosteal variety which may closely resemble an enthesopathy, both clinically and radiologically [3–5]. Periosteal osteosarcomas are rare, and account for approximately 1% of all osteosarcomas. Characteristically there is a radiodense juxtacortical mass with fine vertical bony spicules and marked associated periosteal reaction, which may mimic the florid periosteal reaction of an enthesopathy. However, it is usually possible to differentiate between these two conditions by the rapidity of onset, location, adjacent joint involvement and degree of surrounding soft tissue swelling.

In our patient the diagnosis was made difficult by the unusual presentation, but was facilitated by the emergence of a skin rash, later proven histologically to be psoriasis. Two similar cases have been reported in the literature, but one occurred in association with established psoriatic arthritis, and in the other the cutaneous and articular involvement had a simultaneous clinical onset [2].

Palmoplantar pustulosis or pustulotic arthro-osteitis is considered to be a subtype of classic psoriasis, and has been associated with a number of skeletal abnormalities, most commonly sternoclavicular hyperostosis. Tumour-simulating bone lesions of the appendicular skeleton have also been reported in this condition, but in all cases sternoclavicular hyperostosis was present [6], with a high incidence of accompanying spondylitis or sacroiliitis. Our patient did not have any other skeletal sites of involvement, and at no stage developed psoriatic arthritis.

We report this case to highlight an unusual musculoskeletal manifestation of psoriasis. The tumoral enthesopathy in this case was the presenting feature of the disease, the skin rash appearing 4 yr later. An awareness of this unusual condition, combined with CT and/or MRI to exclude any underlying neoplasm, should facilitate the diagnosis. However, in some cases a biopsy may still be needed to exclude malignancy.

K. J. Stevens, S. L. Smith, B. J. Preston, C. Deighton

Department of Radiology and 1Department of Rheumatology, University Hospital, Queen’s Medical Centre, Nottingham NG7 2UH, UK
Accepted 2 September 2000

Correspondence to: K. Stevens, Department of Radiology, Stanford University Medical Center, S-062B Grant Building, 300 Pasteur Drive, Stanford, CA 94305-5105, USA.


