

RAPID COMMUNICATION

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Coexistence of osteochondroma and reactive arthritis

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Osteochondroma is a relatively common metaphyseal lesion, especially around the knee. It accounts for approximately 40% of benign bone tumors and 10% of all primary skeletal tumors.¹ On the basis of the number of patients who seek treatment, 90% of these tumors occur as solitary osteochondromas, as in our case, and the remaining 10% are hereditary multiple osteochondromas.²

A 16-year-old boy had been in good health until he started to experience joint swelling and pain in the right elbow, right wrist, knee, third and fourth toes of the left foot, and left heel, inflammatory spinal pain and back stiffness in the morning, and conjunctivitis in the left eye. There was no family history of arthritides. On physical examination he showed synovitis of the joints mentioned above, pain in the sacroiliac joints, multiple enthesitis, sausage-like third and fourth toe of the left foot (Fig. 1, arrows), distal onycholysis, subungual hyperkeratosis (Fig. 1), and balanitis circinata. The Schober index was 13 cm. The rheumatoid factor test was repeatedly negative. The radiology was normal, except for the region of the knee which showed exostoses arising from the metaphyses (Fig. 2, arrows).

A diagnosis of reactive arthritis associated with osteochondroma (exostoses) was established. Treatment with oral methotrexate (10mg weekly) and indomethacin was started and the patient showed improvement within 48h after initiation.

This is the first case reporting the coexistence of reactive arthritis and exostoses. However, two cases of ankylosing spondylitis associated with exostoses have been previously reported.^{3,4}

Reactive arthritis is a syndrome of asymmetric oligoarthritis associated with enthesitis (inflammation of tendinous or ligamentous insertions) and extra-articular signs, such as urethritis, cutaneous manifestations, and conjunctivitis, predominantly affecting the lower limbs, occurring in young adults, and following mucosal infections with certain enteric or genitourinary pathogens, particularly *Chlamydia*, *Shigella*, *Salmonella*, *Yersinia*, and *Campylobacter*. Cutaneous manifestations occur in up to 50% of patients. Keratoderma blennorrhagicum is a hyperkeratotic lesion seen in about 25% of affected men, usually on the soles of the feet or palms of the hands. Nail changes similar to those of psoriasis are seen in up to 15% of patients, and circinate balanitis is a painless shallow erythematous ulcer of the glans penis, seen in up to 25% of men.⁵

On the other hand, osteochondromas are believed to arise from aberrant cartilaginous epiphyseal growth-plate tissue that proliferates autonomously and increases in size by enchondral ossification.¹ Growth of the osteochondroma is slow and usually stops at the time of completion of the growth of the nearest epiphyseal center. Osteochondromas may originate from any bone preformed in cartilage, but are most common in the distal aspect of the femur, proximal aspect of the humerus, and proximal aspect of the tibia, corresponding to the sites of most rapid bone growth.^{1,2,6} The tumors can be sessile or pedunculated, pointed, bulbous, or cauliflower-like, with evidence of a definite continuity between the cortex and spongiosa of the lesion with those of the host bone.^{1,7}

Sessile osteochondroma can be difficult to differentiate from parosteal osteosarcoma, juxtacortical chondrosarcoma or chondroma, Ollier's disease, and myositis

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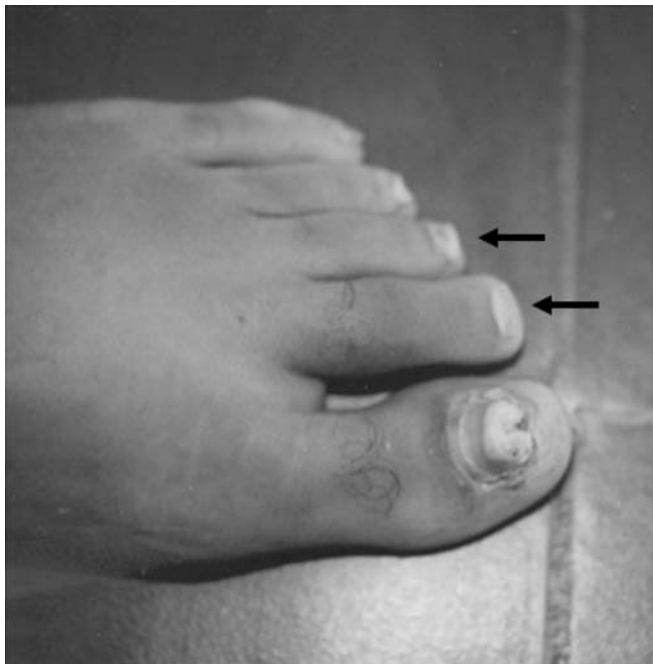


Fig. 1. Image showing sausage-like toe in third and fourth toes of the left foot (*arrows*), distal onycholysis, and subungual hyperkeratosis



Fig. 2. X-ray showing exostoses arising from the metaphyses of the knee

ossificans.⁸ Imaging studies and bone scintigraphy can aid in the diagnosis prior to definitive histological analysis.

Patients usually present with pain caused by bumping the lesion or by the movement of adjacent muscles over the osteochondroma, limitation in the range of motion of

the adjacent joint, or a palpable mass during the first or second decade of life.¹ However, because of indolent growth these tumors can remain asymptomatic throughout the patient's life. Other presenting symptoms may be due to pressure against nerves, blood vessels, tendons, joints, or bones, bursa formation, pathological fracture, infarction, osteomyelitis, or malignant degeneration.⁹

The incidence of malignant change of a solitary osteochondroma is probably less than 1%, but could be up to 20% for hereditary multiple exostoses.¹⁰ Pain and rapid enlargement are signs of malignant degeneration.

Radiographs are usually diagnostic for osteochondroma and may be used to monitor the patient during follow-up evaluations. Confirmed diagnosis of osteochondroma should combine clinical presentation and appearance, laboratory data, radiographic evaluation, and possible biopsy of the lesion.⁸ The coexistence of osteochondroma and spondylarthropathies in our patient probably represents a coincidence rather than real association, but it cannot be excluded that the pre-existing inflammatory processes or tissue destruction in the spondylarthropathies might have rendered the patient prone to the development of osteochondroma.

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