Case Report

# Leg pain — a rare presentation (osteochondroma — a case report)

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**The important causes of leg pain are due to diseases affecting bones, joints, arterial occlusion, venous occlusion, muscle cramps, tendinitis, shin splints & compression to arteries and nerves. Here a 39 year old lady presented with vascular claudication due to pressure effect of osteochondroma is discussed. Treated by Excision of the tumor along with a femoro-popliteal bypass graft.**

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***Key words*** **: Osteochondroma, vascular claudication, sessile exostosis, hereditary multiple exostosis, femoro-popliteal graft.**

The causes of leg pain are due to diseases affecting bones, joints, arterial occlusion, venous occlusion, muscle cramps, tendinitis, shin splints, compression to arteries and nerves and many. Here a female patient presented with vascular claudication due to pressure effect of osteochondroma is discussed. Osteochondroma is the most common benign tumor accounting to 36% of benign tumors affecting bones. The usual complaint of a person having osteochondroma is a painless hard slow growing swelling. Pain may occur due to bursitis, fracture of pedicle, compression of the adjacent structures and malignant transformation. Lesions which occur near to the joint may cause restriction of movement. Long standing osteochondroma may cause angular deformity of bone or limb length discrepancy. Osteochondroma is a developmental anomaly of the bone that results in the formation of exophytic outgrowth on the surface of the bone[1]. It may be single (solitary osteocartilaginous exostosis) or multiple (hereditary multiple exostosis). The case's rarity exists in it's presentation, type of tumor, the vascular blockade at the femoral side by a small swelling, and surgical treatment that had undergone.

## Case Report

A 39 years old woman, married with 2 children. Normal body structure with moderately built and nourishment. She is a relative of our own pediatrician at medical college, Trivandrum. She came to Orthopaedic OP with leg pain since 3 months. On examination a bony swelling noted in the upper end of left tibia (Fig 1). The swelling was there since 30 years. She started experiencing an aching pain in the leg on walking and other activities. She had to take a few minutes rest to get relief of pain. Some surgical procedure was done at 14 years in the right iliac region (details not available). Clinically it was a case of vascular claudication. Posterior tibial and Dorsalis pedis pulsation absent left side. No neurological deficit noted on both lower limbs. All other systems within normal limits except allergic history to dust.

***Investigations*** — (1) X-Rays of her pelvis, left femur and tibia -to find bony outgrowths suggestive of osteochondromas in the distal femur, proximal tibia and in the proximal part of right femur.

(2) Doppler study of artery and vein whole leg right and left.

(3) CT Angiogram - Fig 2 - The distal popliteal artery at its bifurcation is occluded by a thrombus.

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***Diagnosis*** — 39 years old female having multiple exostosis, both sessile and pedunculated types. Presenting symptom vascular claudication. Occluded by thrombus at bifurcation of popliteal artery.

***Treatment*** — All pre-operative evaluations done. Vascular surgery consultation done. Excision of osteochondromas in the femur and tibia along with a femoro-popliteal bypass graft done. The graft harvested from great saphenous vein of the opposite limb.

Fig 1 — Sessile osteochondroma upper tibia

Post operatively she developed wound infection in the thigh. Secondary debridement and suturing done. After 65 days she was discharged with a good distal pulse. Pain relived by 14 days clinically and she can walk comfortably by 3 months. A Doppler study repeated a month later showed good flow through the graft vessel. She was on anticoagulant since 1 year from the date of surgery and stopped thereafter. Regular Prothrombin Time check up was done during the period. The resected tumor send for histopathology and confirmed the diagnosis.

## Discussion

Osteochondroma, or osteocartilaginousexostosis, is the most common skeletal neoplasm. The above case is that of multiple exostosis which constitutes approximately 12% of all symptomatic lesions in the literature[2]. Osteochondromas can either be flattened (sessile) or stalk-like (exostosis) and appear in a juxta-epiphyseal location. After the closure of the growth plate in late adolescence there is normally no further growth of the osteochondroma[3].

Osteochondromas are found most often in long bones particularly in the distal femur and proximal tibia, with 40% of the tumors occurring around the knee. It usually occurs in the first two decades of life with a male preponderance (male to female ratio of 1.5 to 1)[3,4].

Hereditary multiple exostosis otherwise called hereditary multiple osteochondromatosis is characterized by growths of multiple osteochondromas (benign cartilage-capped bone tumors that grow outward from the metaphyses of long bones)[4,5]. Osteochondromas can be associated with a reduction in skeletal growth, bony defor-

Fig 2 — Pedunculated osteochondroma lower femur

mity, restricted joint motion, shortened stature, premature osteoarthrosis, and compression of peripheral nerves[4]. The median age of diagnosis is three years; nearly all affected individuals are diagnosed by age 12 years. The risk for malignant degeneration to sarcoma increases with age, although the lifetime risk of malignant degeneration is low (~1%). Local pain and recent increase in size are usual presenting symptoms of malignant transformation[5].

Indications for en bloc resection are (1) An unsightly large lesion, (2) Symptomatic lesion from pressure on surrounding structures, (3) Malignant transformation. Recurrence is rare and probably is caused by failure to remove the entire cartilaginous cap. Patients with multiple hereditary exostosis may require osteotomies to correct deformity[5].

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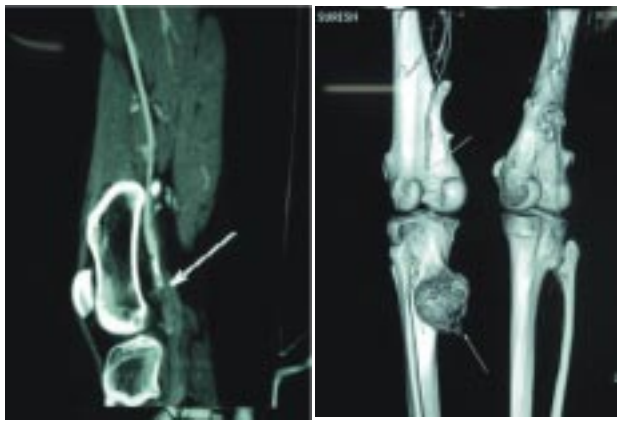

Fig 3 — CT Angiogram showing blockage of popliteal artery by the osteochondroma