Recurrent solitary osteochondroma of the metacarpal: a case report

Srinivasan Rajappa,1 M Mohan Kumar,1 S Shanmugapriya2
1 Division of Hand Surgery, Department of Orthopedics, Sri Ramachandra University, Porur, Chennai, India
2 Department of Pathology, Sri Ramachandra University, Porur, Chennai, India

Address correspondence and reprint requests to: Dr Srinivasan Rajappa, B2 Private clinic, Department of Orthopedics, Sri Ramachandra University, Porur, Chennai, 600 116, Tamil Nadu, India. Email: chickko2002@yahoo.com

Introduction
Osteochondromas of the hand and wrist is uncommon except in multiple hereditary exostosis. Only 4% of solitary osteochondromas involve the hand and wrist,1 and usually affect the proximal phalanx in the second to third decade of life. We report a 33-year-old man with a recurrent solitary osteochondroma of the metacarpal.

Case Report
In March 2009, a 33-year-old man presented with a 6-year history of progressive swelling in the left hand. He had undergone excision of the swelling at that time and repeat excision 6 months later for recurrence. The patient had been diagnosed as having exostosis.

The swelling was bony hard and irregular. A portion of the swelling was palpable on the palmar side, which appeared after the first surgery. He had no regional lymphadenopathy. There were no similar swellings elsewhere in the body. Radiographs showed a sessile bony lesion arising from the surface of the middle finger metacarpal, almost encircling the whole bone (Fig. 1). Computed tomography and magnetic resonance imaging showed no breach of the cortex and continuity of the medullary cavity in the proximal metaphysis (Fig. 2).

Under regional anaesthesia and tourniquet control, the patient underwent total excision of the
swelling from the dorsal side via the scar of the previous surgery. The second inter-metacarpal space was dissected to facilitate excision of the palmar component of the swelling. Histopathological features of the resected specimen showed cartilage cells amid hypercellular stroma (Fig. 3) and were suggestive of osteochondroma. No cellular atypia or mitotic figures were noted. At the 2-year follow-up, there was no evidence of recurrence.

**DISCUSSION**

A study reported only 4 of 1024 solitary osteochondromas were in the metacarpal. A solitary osteochondroma of the metacarpal neck resulting in flexion deformity of the metacarpophalangeal joint was treated by excision. Its differential diagnosis...
included Nora’s lesion, florid reactive periostitis, and Turret exostosis. Another osteochondroma in a child resulting in synostosis between the fourth and fifth metacarpals was treated by excision and fibular grafting.  

Nora’s lesion or bizarre parosteal osteochondromatous proliferation usually arises from the surface of the bone and does not have any continuity with the medullary cavity. Histologically, it contains varying amounts of cartilage, bone, and fibrous tissue. The cartilage is hyper cellular and contains irregular groups of bizarre chondrocytes, which are binucleated. Hyperchromasia and cellular atypia are not present.

Turret exostosis occurs in the dorsum of phalanges following trauma. Trauma results in a sub-periosteal haematoma which ossifies and produces a protuberance. Florid reactive periostitis also occurs following trauma but is characterised by pain, swelling, and a periosteal reaction visible on radiographs.

In our patient, recurrence may be due to incomplete excision, because the patient complained of persistent swelling even after the second surgery. Total resection was difficult because the lesion encircled the bone and the space between metacarpals was limited. A separate palmar incision was not used because a total resection through a dorsal incision was feasible.

DISCLOSURE

No conflicts of interest were declared by the authors.

REFERENCES