Radiology Case Reports xxx (2017) 1–7

Available online at www.sciencedirect.com

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journal homepage: http://Elsevier.com/locate/radcr

Case Report

Para-articular extraskeletal chondroma mimicking first metatarsophalangeal synovitis

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ARTICLE INFO

Article history:
Received 15 February 2017
Received in revised form
14 March 2017
Accepted 25 March 2017
Available online xxx

Keywords:
Extraskeletal chondroma
Metatarsophalangeal joint
Para-articular chondroma

ABSTRACT

Extraskeletal chondroma is a rare benign tumor with symptoms that could mimic other common musculoskeletal pathological entities. We present a rare case of an extraskeletal para-articular chondroma of the first metatarsophalangeal joint which was initially misinterpreted as joint synovitis, based on magnetic resonance imaging findings. Histology revealed benign chondroma of the foot, which was finally treated with radical surgical excision. More than 2 years postoperatively, no recurrence of the tumor has been encountered.

Introduction

Only a few cases of chondromas with rare extraskeletal location have been reported in the literature, including synovial chondromatosis, para-articular and soft-tissue chondromas [1–3]. The extraskeletal chondromas (ESCs) predominantly occur in the hands and feet of middle-aged adults with equal sex predilection [4]. The principal histological characteristic is the multinodular proliferation of cartilaginous cells, but they may also vary significantly in terms of focal atypia and presence of binucleated chondrocytes [5]. Although recurrence after surgical removal can be observed,

Competing Interests: The authors have declared that no competing interests exist.

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http://dx.doi.org/10.1016/j.radcr.2017.03.025

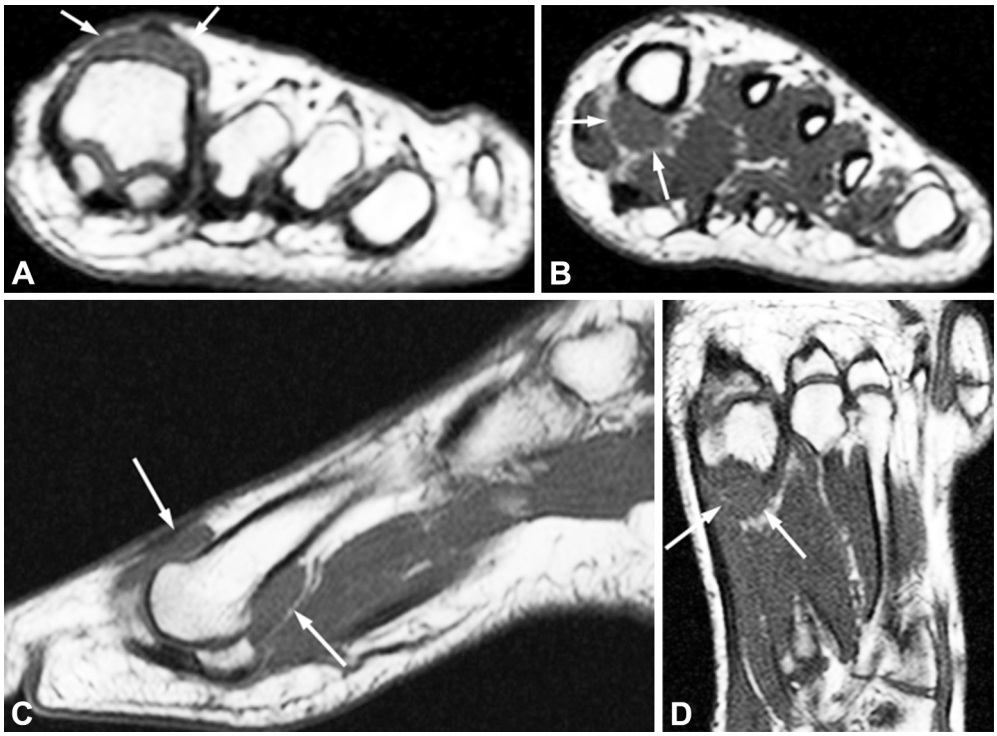

Fig. 1 – Axial (A, B), sagittal (C), and coronal (D) T1-weighted MR images of the foot, depict a para-articular mass, with a lobulated contour surrounding the first MTPJ and extending into the soft tissues of the dorsal and plantar aspect of the metatarsal head and neck with homogeneous intermediate (similar to muscle) signal intensity (arrows).

ESCs never metastasize [5]. In this article, a rare case of a para-articular ESC at the first metatarsophalangeal joint (MTPJ) of the foot is depicted.

Case report

A 34-year-old male presented with persistent pain and mild effusion of the first MTPJ of his left foot gradually increasing in size during the previous 1 year. The patient did not seek any medical assistance until he has started having difficulties getting into shoes for the last 2 months. He denied a history of foot trauma, gout, or other inflammatory diseases. Clinically, a solid mobile palpable soft tissue mass around the first MTPJ was evident. No pathological findings were detected at his blood tests. X-rays of the foot were normal without bony erosions or calcifications. Based on the clinical findings, the diagnosis of joint synovitis and/or possible extensor hallucis longus tenosynovitis was considered. Nonsteroidal anti-inflammatory drugs medication was administered immediately and he was recommended to restrict any vigorous activities. Physiotherapy regimen was added after a week, as his symptoms persisted. There was a slight improvement in his pain, which lasted only 2 weeks. After this period, the pain reoccurred with the initial intensity. There was no difference regarding the joint effusion all this time. As a 3-month nonoperative treatment failed to achieve symptoms relief, a foot magnetic resonance imaging (MRI) was prescribed. MRI depicted a diffuse periarticular mass, measuring 4 cm in length, with a lobulated contour surrounding the first MTPJ and extending into the soft tissues of the dorsal and plantar aspect of the metatarsal head and neck. The lesion demonstrated homogeneous intermediate (similar to muscle) signal intensity on T1-weighted images (Fig. 1), intermediate signal intensity (higher than muscle) on T2-weighted scans (Fig. 2), and high signal intensity (lower than water) on short tau inversion recovery sequence (Fig. 3). Neither muscle edema nor osseous involvement was present. A small amount of joint effusion was detected (Fig. 3). Furthermore, there was absence of areas of decreased signal intensity (flow voids) in the lesion, on all pulse sequences, indicative of calcifications or ossifications. Finally, marked diffuse enhancement of the mass was evident after intravenous (iv) administration of gadolinium (Fig. 4). These findings were strongly suggestive for joint synovitis.

A decision for surgical intervention was made and the patient consented for surgical removal of the mass. Under general anesthesia, a dorsal approach of the first MTPJ was performed through a longitudinal incision. A whitish solid mass emerged (Fig. 5), consisted of 4 particles surrounding the joint, with no infiltrations or adhesions to the capsule, the cartilage, or the bones. The dimensions of the 4 particles of the mass were measured to be 15 × 10 mm, 10 × 8 mm, 7 × 5 mm, and 5 × 3 mm (Fig. 6). The preoperative MRI suggestion of joint synovitis was not confirmed. No intra-articular tumor involvement was detected. All the mass particles were referred for histopathological examination. A short ankle foot orthosis brace was applied for 2 weeks. Partial weight bearing was allowed on the third week and full weight bearing on the fourth week.