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Chondroid Syringoma of the Foot: A Rare Diagnosis

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ABSTRACT

Chondroid syringoma is a rare tumor with the potential for malignant transformation and distant metastasis. The site of predilection for benign chondroid syringoma is the head and neck region, and it is less likely to involve the foot. In contrast, malignant chondroid syringoma is more commonly encountered in the extremities and is characterized by rapid growth, local invasion, and distant metastasis. We report an unusual case of benign chondroid syringoma in a 47-year-old female who presented with a 20-year history of a mass in her left foot to bring such cases to the attention of foot and ankle specialists. We highlight the histologic diagnosis and surgical procedures with a 6-month postoperative follow-up period. It is unlikely that a treating physician would anticipate this histologic tumor type, considering the rarity of the condition, the long history of this patient's lesion, and the benign presentation in the extremities.

Pleomorphic adenoma, or chondroid syringoma (CS), is a rare benign skin appendageal tumor (1,2). Originally described by Bilmuth in 1859, Hirsch and Helwig (3) were the first to use the term *chondroid syringoma* to this tumor type in the early 1960s and described the presence of sweat gland elements in cartilaginous stroma (4–6). CS is rare among primary skin tumors, with a reported incidence of <0.098% and usually affects middle-age or older male patients (2,7–11). Most lesions are 1 to 3 cm in diameter, although examples as large as 10 cm have been reported (2,7–11). The site of predilection for CS is the head and neck region, and it is less likely to involve the foot (2,7,12–15).

In contrast, malignant CS has been more commonly encountered in the extremities and is characterized by rapid growth, local invasion, and distant metastasis (3,16–18). It is typically asymptomatic and has been reported as a slow growing, nonulcerating mass contained in the dermis or subdermis (3,19,20). Benign CS rarely presents in the extremities; therefore, it is unlikely that the treating physician would anticipate this histologic tumor type (4). Nonetheless, because malignant transformation has been reported (3,16,17), we believe it is worth alerting surgeons to this rare case.

Case Report

A 47-year-old female presented in July 2012 with a solitary slow-growing painless mass on the plantar aspect of her left foot. The patient reported having had the lesion for approximately 20 years; however, she had noted a relatively more rapid increase in the size of the lesion in the previous 2 years. The patient reported no significant medical or surgical history, no allergies, no medication use, and no family history of malignancy. She denied any paresthesia or motor weakness in the left foot. The findings from a review of systems were negative. The physical examination showed a 3-cm × 3.5-cm, nontender, mobile subcutaneous mass with overlying intact skin on the left foot plantar arch (Fig. 1). The vascular examination revealed no abnormality. No sensory or motor deficits were noted in the left foot. Finally, no ipsilateral popliteal or inguinal lymphadenopathy was appreciated on examination. In August 2012, a magnetic resonance imaging (MRI) examination was performed using fast spin echo, coronal and axial imaging with and without fat suppression and short tau inversion recovery sagittal imaging (Fig. 2). MRI examination identified a 3-cm, plantar, soft tissue lesion contiguous with the skin, subcutaneous fat, and fascia at the level of the base of the first metatarsal. The lesion demonstrated diffuse high-signal intensity with slight heterogeneity and abutted on the plantar fascia without invasion of the fascia or surrounding structures. A histologic correlation was suggested because of the atypical presentation of the lesion. The patient refused surgical intervention at the initial consultation after being made aware of all the possible risks.

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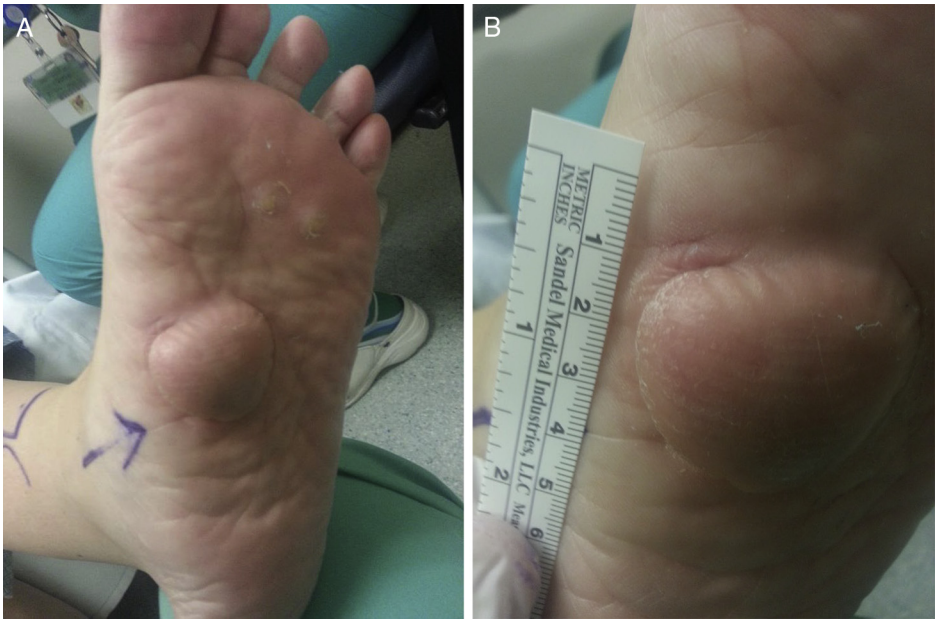

Fig. 1. *(A* and *B)* Left foot solitary plantar aspect showing subcutaneous mass of the medial arch area.

In March 2014, prompted by her family's concerns for her well-being, the patient returned to our office and agreed to surgical intervention. At that time, the patient reported the lesion had persisted without any significant increase in size, appearance, or symptoms compared with her previous visit in July 2012. She continued to deny any pain or accompanying neurovascular symptoms. The physical examination findings remained unchanged from those in July 2012. Considering the unchanged presentation and physical examination findings, including the stable status of the ipsilateral popliteal and inguinal lymph nodes, additional MRI was deemed unnecessary at that time.

Surgical excision of the lesion was performed in April 2014 and included wide excision of the lesion. The patient was placed on the operating room table in the supine position. After intravenous sedation, local anesthesia was obtained about the patient's left foot using 20 mL of 1% plain lidocaine. The foot was then scrubbed, prepared, and draped in the usual aseptic manner. An Esmarch bandage was used to exsanguinate the patient's left foot. A pneumatic ankle

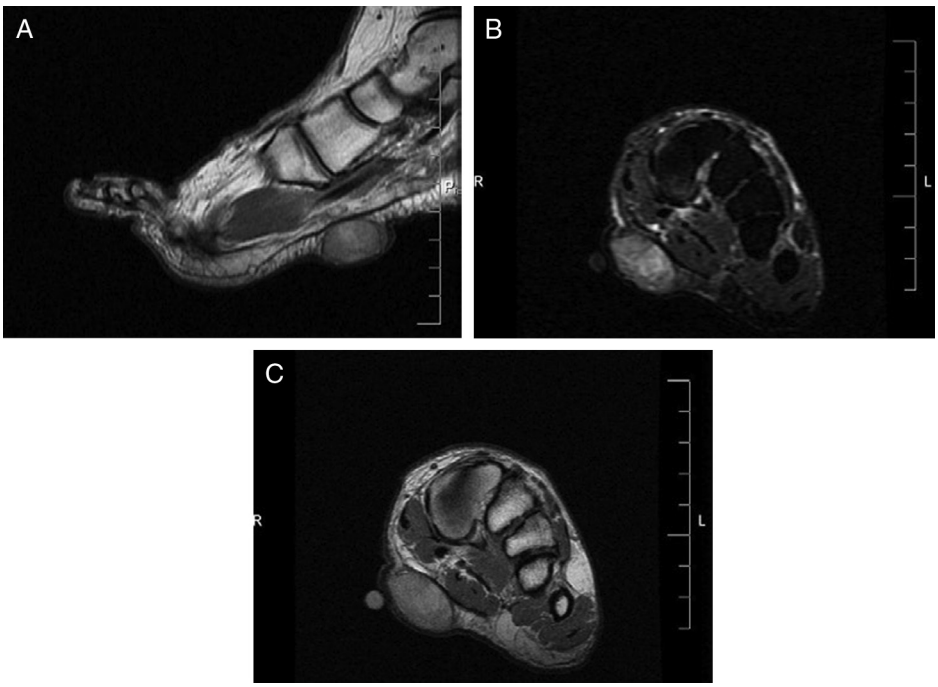

Fig. 2. *(A)* Sagittal T_2-weighted magnetic resonance imaging non–fat-suppressed image showing the mass with heterogeneously mixed signal intensities. *(B)* Short-axis T_2-weighted magnetic resonance imaging, fat-suppressed image showing a mildly hyperintense mass. *(C)* Short-axis T_2-weighted non–fat-suppressed image showing the mass with heterogeneously mixed signal intensities. (Magnetic resonance imaging scans provided courtesy of Bay Ridge Imaging, PC.)