Case Presentation

On May 5, 2008, a 42 year old male presented to clinic complaining of painful calluses and masses on the balls of both feet. The masses had been present on his feet for several years and seemed to slowly enlarge, with progressive discomfort. He denied any prior foot or ankle surgery. He had a negative past medical history. A focused physical exam revealed bilateral large masses noted in the lesser toes and plantar sulcus areas. These masses mildly tend to palpation, and were firm, non-mobile structures, non-palpable without fluoroscopy. These masses did not trans-illuminate. No synovium or edema was appreciated here. Lesser MPJ’s showed limited range of motion, and attempted ROM produced pain, particularly with end range dorsiflexion. Initial X-ray evaluation of both feet demonstrated increased soft tissue density, otherwise a benign radiographic MRI evaluations were then obtained, revealing fairly well defined, large masses on the bilateral forefoot. T1 and T2 weighted images demonstrated intermediate intensity. Neuropathic process could not be ruled out. For definitive confirmation the patient was then consented to a core needle biopsy of bilateral feet. Core needle biopsy was performed on May 30, 2008 under fluoroscopic guidance. Three samples were taken from each foot to ensure adequate sample for pathological evaluation. Subsequent pathological evaluation showed fibroblastic proliferation in all samples. Immunohistochemical staining was consistent with plantar fibromatosis.

A careful review of the literature revealed several points of interest. (1,2,3,4,5,6,7,8,9,10) A few things are very important. First, these lesions are slow growing tumors. Second, they present with pain and tenderness. Third, they can present anywhere within plantar foot. We experienced an unusual location within the sulcus and surgical management of the case.

Recurrent lesions typically manifest between 2 and 12 months postoperatively (1,2,10). Recurrence rates are reported at 60 - 100% (1,2,10). Recurrence rates are reported at 60 - 100% with a 5% to 20% risk of local recurrence (1,2,10). Final follow-up was obtained in May 2008, and the patient was found to have no local recurrence.

Surgical planning. Lesions can show signal intensity heterogeneity on MR imaging (15). Trans-illumination was noted in the lesser metatarsal and sulcus areas. These areas were mildly tender to palpation, and there was no trans-illumination noted in the lesser metatarsal areas. These areas were mildly tender to palpation, and there was no trans-illumination noted in the lesser metatarsal areas.

Discussion

Although plantar fibromatosis commonly occurs in the medial band of the plantar fascia they can occur anywhere within plantar foot. We experienced an unusual location within the sulcus. All three surgical specimens had similar sizes. The ranges from 5.6-0.0 cm x 2.2-3.5 cm x 1.5-2.4 cm. Pathological evaluation was performed both at Cleveland Clinic as well as Kaiser Permanent due to the unusual location. Both confirmed plantar fibromatosis as the diagnosis. The revisional surgery on the left foot was technically difficult due to prior scar tissue. The lesion was difficult to approach and the patient had a normal anterior incision. We account for the residual numbness that the patient is currently experiencing. Consistent with a typical fibroma presentation/course the lesion within the sulcus can recur despite extensive debulking.

References