Leiomyoma in a Finger: Case Report

Vaidya RK*, Dahal S**, Vaidya KM***
*Orthopedics, Suvekchya International Hospital and Research Center, Sitapaila, Kathmandu, Nepal.
**Orthopedics, ***Department of Pathology, Paropakar Maternity Hospital, Kathmandu.

ABSTRACT
Leiomyoma, a benign nonstriated muscle tumor, is rare in limbs and rarer in the hands. Its common localization is in the uterus. We present a case of leiomyoma of the right middle finger in a 59 years old man. Surgical excision was performed with a good recovery and no signs of recurrence at a year follow up. We discuss diagnosis, prognosis and therapeutic aspects of this benign tumor with review of literature.

KEY WORDS: Excision, Finger, Leiomyoma

INTRODUCTION:
Leiomyoma, a benign slow growing tumor originates from smooth muscle.\(^1\) It can develop anywhere the smooth muscle is present and is most commonly found in the uterus of women in their third to fifth decades.\(^2\) Leiomyomas in the hand are very rare because of the minimal amount of smooth muscle in the area.\(^3\) Hence diagnosing them on clinical evaluation is difficult, however, they may be more painful than other common benign tumors and may originate from a digital artery.\(^4\) The first case of leiomyoma in hand was reported in 1960 by Butler et al, since then, only rare occurrences have been reported from all around the world.\(^5\)

CLINICAL CASE:
A 59 years old, right handed male plumber presented with a painless swelling on his right middle finger. The swelling had started 15-16 years back, which increased in size gradually. There was no history of trauma or any other significant illness. On physical examination, there was a 3cm x 2cm mobile, non tender, firm mass at the base of third finger on its ulnar side (Figure 1) without neurovascular impairment.

Plain X-Ray revealed a soft tissue mass without any microcalcification or bony involvement. Ultrasound or MRI was not performed.

Under brachial plexus block, a dorsomedial incision directly above the mass was given. A well capsulated mass measuring 3cmx2cm, which did not involve the neurovascular bundle or the tendons, was isolated and removed in its entirety (Figure 2).

Macroscopically, an ovoid, grayish, well encapsulated, rubbery mass was sent for histopathological examination. The microscopic examination revealed cells arranged in long fascicles. The cells had spindle shaped nuclei, fine chromatin and moderate amount of eosinophilic cytoplasm without any atypia (Figure 3). The diagnosis was made as vascular leiomyoma. Immunohistochemical examination was not performed.

The wound healed without any complication. At one year follow up, motor and sensory functions were intact. There was full range of motion of the finger joints and a normal hand function. No recurrence was observed.

Correspondence:
Dr. Rupesh Kumar Vaidya
Department of Orthopedics,
Suvekchya International Hospital and Research Center, Sitapaila, Kathmandu, Nepal.
Email: rupeshortho@yahoo.com,
Mobile: 9851037513
Figure 1: Dorsal and palmar view of the right hand showing the soft tissue mass at the base of the middle finger.

Figure 2: Intraoperative image of the tumor. A. Well encapsulated mass which does not involve the major neurovasculature or the tendons. B. Macroscopic appearance of the tumor, measuring 3x2 cm.

Figure 3: Microscopic appearance of the tumor. Cells arranged in long fascicles with spindle shaped nuclei, fine chromatin and moderate amount of eosinophylic cytoplasm without any atypia.

DISCUSSION:

Leiomyoma has been described wherever smooth muscle is present, including uterus, esophagus, gastrointestinal stroma, lung pleura and the extremities. Leiomyoma in the hand is uncommon,
most probably due to the minimal amount of smooth muscle in the hand. In a pathology review of 562 cases of Leiomyoma, less than 10% were located in the hand. There are three different types of Leiomyoma as described by Enzinger and Weiss: vascular, cutaneous and deep soft tissue. Leiomyoma of hand is associated with pain in more than 80% of cases. Initially the tumor might be painless, which often progressively develops pain, perhaps from compression of surrounding nerve. In our case the tumor was painless for 15-16 yrs. In reviewing other studies, there was no case of spontaneous regression of the tumor. 

The evolution of the tumor is generally benign. MRI imaging can be helpful in distinguishing between benign and malignant soft tissue tumors; however MRI alone cannot reliably distinguish between various benign soft tissue tumors of hand. This modality of investigation is especially useful in identifying the anatomic borders and vascular involvement of the tumor preoperatively. Immunohistochemical study for smooth muscle actin can be performed to confirm the diagnosis histopathologically.

Typically, Leiomyoma does not show mitotic activity. The treatment of Leiomyoma is complete surgical excision. It is usually curative and has never been reported to metastasize. Billings et al reported neither recurrences nor metastases after excision of somatic soft tissue leiomyomas during a mean follow up of 58.7 months, with the longest follow up being 97 months. This is even more impressive considering that five patient were known to have microscopically positive margins. Although the chances of malignancy are rare, these tumors should be approached with caution until histopathologic examination confirms the absence of nuclear atypia, necrosis and mitotic activity.

**CONCLUSION:**

Leiomyoma is a rare tumor of the hand. It should be considered when a patient presents with an isolated slow growing mass in a hand. After complete surgical excision, the prognosis is good without risk of recurrence.

**REFERENCES:**