Subungual angioleiomyoma

Sir,

A 40-year-old woman presented with a 5-month history of nail changes and tenderness of the left index finger. Onychoschisis and localized longitudinal erythronychia were noted, extending from the proximal nail fold to the distal tip of the nail plate [Figure 1a]. The greatest tenderness was evident at the lunula and proximal nail fold.

The nail plate was avulsed under local anesthesia for an evaluation. After a longitudinal incision and retraction of the proximal nail fold, a circular, dark red tumor was revealed. The tumor was easily shelled out by a spindle-shaped incision and the wound closed using 5-0 nylon. The wound healed without complication [Figure 1b]. The subsequent nail growth was uneventful, and complete 6 months after the surgery. The patient had no further pain and has not shown any signs of tumor recurrence during a 1-year follow-up.

Histological examination revealed a fibrillar encapsulated tumor comprised of fascicles of spindle cells with a complex arrangement [Figure 1c]. In some areas, intersecting bundles between slit-like vascular channels were evident [Figure 1d]. Immunohistochemistry showed that the spindle cells were positive for alpha-smooth muscle actin [Figure 1e] and desmin. Endothelial cells lining the vascular channels were positive for CD31 [Figure 1f] and CD34 [Figure 1g]. Epithelial membrane antigen and S-100 protein were negative. These findings were consistent with an angioleiomyoma.

Angioleiomyomas are variants of dermal leiomyomas with vascular smooth muscle differentiation. The tumor tends to occur most commonly within the 30–50 year age range and is approximately twice as prevalent in women than in men.[1] It appears most frequently on the extremities, especially the legs; the upper extremities are affected in <10% of cases.[1] We found only two previous reports of subungual angioleiomyomas.[2,3] Baran *et al*. reported a subungual angioleiomyoma that presented with onycholysis.[3] In this case, onychoschisis and longitudinal erythronychia were present. Longitudinal erythronychia is a term for red streaks in the nail due to a benign or malignant neoplasm or an inflammatory process in the distal matrix.[4] Although the most common cause of longitudinal erythronychia is onychopapilloma, other

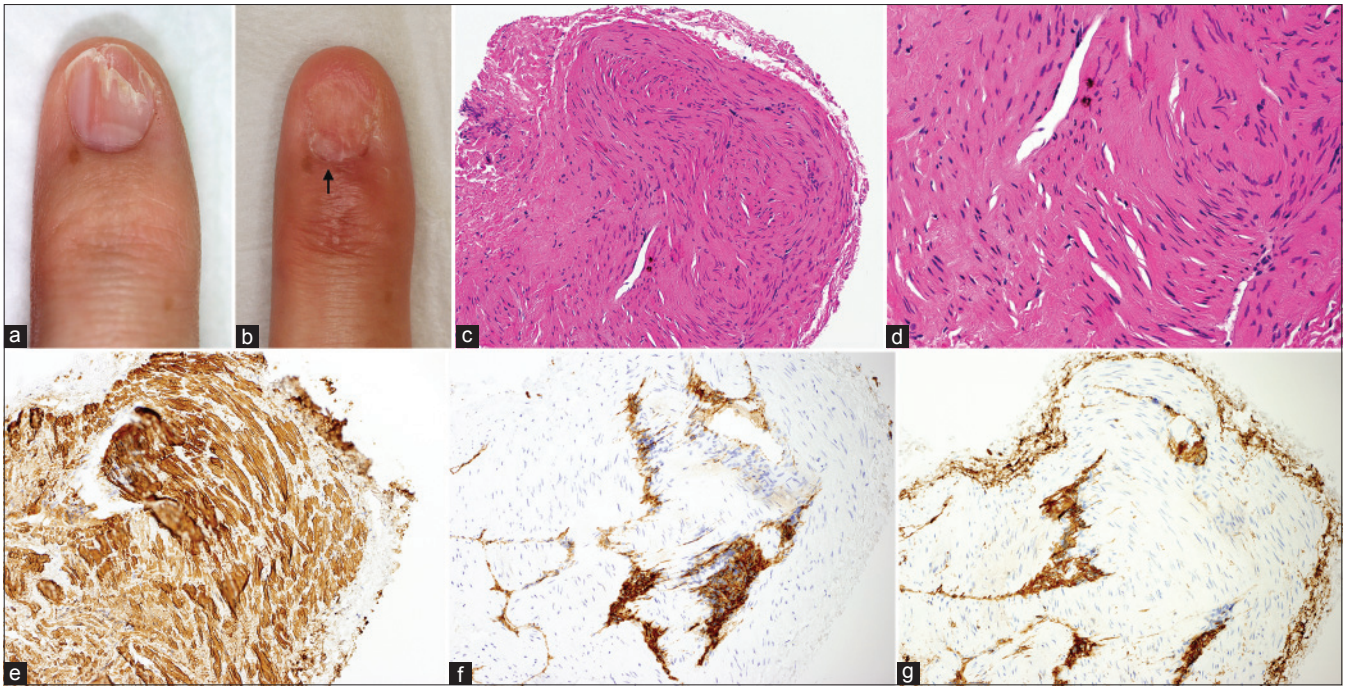

Figure 1: (a) Left index finger. Onychoschisis and longitudinal erythronychia extend from the free end of the nail plate to the proximal nail fold. (b) 4-week follow-up after operation, the patient had no further pain. Arrow shows the location where the tumor was present. (c) Fibrillar encapsulated neoplasm composed of fascicles of spindle cells with a complex arrangement (H and E, ×100). (d) In some areas, interlacing bundles between vascular channels were evident (H and E, ×200). (e) Immunohistochemistry showed that the spindle cells were positive for alpha-smooth muscle actin (×100). (f and g) Endothelial cells lining the vascular channels were positive for (f) CD31 (×100) and (g) CD34 (×100)

conditions such as glomus tumor, Bowen's disease and warts have also been reported.[4] The pathogenesis of this tumor is unknown although several theories have been proposed including trauma, infection, hormone changes and arteriovenous malformations.[5] Diagnosis is usually made after excision and histopathologic examination. Pain and tenderness are the only clinical characteristics that suggest the presence of this tumor, although not all angioleiomyomas are painful. The differential diagnosis includes other tumors associated with pain such as glomus tumor, spiradenoma, angiolipoma or neuroma. For subungual tumors, differentiating angioleiomyomas from glomus tumors is essential. Imaging techniques, including magnetic resonance imaging, are not specific for this type of tumor[5] and correct diagnosis depends on histological examination. Histopathologically, angioleiomyomas are composed of interlacing bundles of smooth muscle fibers with centrally located, thin, blunt-edged, "eel-like" nuclei and eosinophilic vacuolated cytoplasm whereas glomus tumors consist of glomus cells which have round to oval nuclei with a uniform appearance.[3]

Although reports of subungual angioleiomyoma are very rare, it has to be considered in the differential diagnosis of a subungual tumor.

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Conflicts of interest
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