would help identify delayed reactions. Rubianes and Sánchez² suggested waiting 4 weeks after a skin test before performing the procedure to improve identification of latent reactions.

Treatment of both tattoo and microblading granulomatous reactions can be problematic for physicians. First-line treatments include potent topical and intralesional corticosteroids which often lead to remission and have minimal adverse effects if used correctly.^{3,4} Although both tattoo and granulomatous reactions may resolve spontaneously or respond to first-line treatment, when a patient fails to improve, systematic oral steroids are often effective as was seen in our case.⁵ Alternative treatments include surgical excision of the granulomas or laser treatment. Laser treatment of any allergic tattoo reaction may be complicated by a systemic anaphylaxis from the release of pigment particles into the blood circulation and is therefore not routinely recommended.³

In the era of fast beauty, it is easy to find an aesthetician available to perform microblading. Despite the seeming harmlessness of the procedure, it is vital to advise our patients of the potential risks microblading entails.

References

- 1. Tierney E, Kavanagh GM. Koebnerization secondary to microblading. *J Cosmet Dermatol* 2021;20:1040–1.
- Rubianes EI, Sánchez JL. Granulomatous dermatitis to iron oxide after permanent pigmentation of the eyebrows. J Dermatol Surg Oncol 1993;19:14–6.
- Quint KD, Genders RE, Vermeer MH. A delayed granulomatous reaction to a cosmetic tattoo of the eyebrows: a report of total regression after intralesional corticosteroid injections. *Dermatol Surg* 2012;38:951–3.
- Huisman S, van der Bent SAS, Wolkerstorfer A, Rustemeyer T. Granulomatous tattoo reactions in permanent makeup of the eyebrows. J Cosmet Dermatol 2019;18:212–4.
- Wang D, Damman J, van Doorn MBA. Een vrouw met bultjes in haar wenkbrauwen [A woman with bumps in the eyebrows]. Ned Tijdschr Geneeskd 2020;164:D4914. Dutch.

Hayley Leight-Dunn, MD* Vanessa Lemly, BA* Anne Chapas, MD* *UnionDerm, New York, New York

OPEN

The authors have indicated no significant interest with commercial supporters.

Soft Tissue Chondroma: A Possible Diagnosis of Single-Digit Nail Clubbing

Soft tissue chondroma (STC) is a benign, slowgrowing cartilaginous tumor characterized by welldemarcated nodule(s) of mature cartilage unattached to the adjacent bone. It commonly occurs in middle-aged people with a predilection to the distal

extremities but rarely involving the subungual area. It has not been reported to induce nail clubbing.^{1,2}

We describe an unusual case of single-digit nail clubbing in a rare location of STC and briefly discuss its differential diagnosis. Patients developing single-



Figure 1. (A) The nail had an increased transverse and longitudinal curvature. (B) Plain radiographs demonstrated a soft tissue tumor shadow. (C) A white solid tumor appeared after removing the nail plate and extremely thin nail bed. (D) Histopathological image of the tumor (H&E, scanned at 20 magnification).

digit nail clubbing should alert the dermatologist to consider the possibility of STC.

A 58-year-old man presented with a clubbed nail of his left index finger without any previous trauma event in the past 10 years. The single-digit clubbing had been ignored by him over the past decade because he had no symptoms. Because the clubbing of his nail gradually enlarged and eventually severely deformed the fingertip resembling a ball, he visited our institution. Dermatologic examination revealed a clubbed nail extending from the distal interphalangeal (DIP) joint to the hyponychium with an increased transverse and longitudinal curvature (Figure 1A). The suspected mass under the nail was hard, elastic, and immobile on palpation and without any signs of inflammation. Of note, there was no movement restriction of the DIP joint. Laboratory test results were normal. Plain radiographs showed a soft tissue tumor shadow, located subcutaneously on the dorsal aspect of the distal phalanx of his index finger, extending from the distal dorsal DIP joint through the subungual region up to the hyponychium (Figure 1B). The tumor had no continuity with the underlying bone. In addition, there were no destructive changes in the distal phalanx and no periosteal reaction. Ultrasound examination exhibited an ovoid, well-defined, heterogenous hypoechoic nodule but without vascularity or continuity to the nearby bone (See Figure S1, Supplemental Digital Content, http://links.lww. com/DSS/A941). Based on these findings, the mass was believed to be a cartilaginous tumor, and excision was performed. After nail avulsion and incision of the extremely thin nail bed over the mass, a white solid tumor appeared. There was no adhesion to the periosteum, and it could be easily separated from the surrounding tissue. Its diameter was about 20 mm (Figure 1C). The tumor was fragile and tended to break when using tweezers to hold it. Histopathology of the tumor revealed mature hyaline cartilage without nuclear pleomorphism (Figure 1D). Thus, it was diagnosed as a STC involving the nail unit. Healing was uneventful, and his nail grew by about a third with slightly uneven nail plate during the 6-month follow-up period.

Soft tissue chondroma is a rare, benign, cartilaginous tumor that is believed to derive from fibroblasts and unattached to the underlying bone. It mainly occurs on the hands or feet of individuals aged 30 to 60 years and rarely involves the subungual part and commonly appears as an asymptomatic slow-growing mass. Over time, the patients complain of symptoms such as local tenderness and pain on action. Swelling of the distal phalanx of the middle finger with progressive distortion of the nail was reported. Histopathology revealed fairly normal mature hyaline cartilage.^{1,2}

Clinically, STC is frequently misdiagnosed because of partial overlap manifestations with soft tissue osteochondroma (STO), juxtacortical (periosteal) chondroma, subungual exostoses, enchondroma, superficial acral fibromyxoma, subungual lipoma, etc., particularly with STO that has been ambiguously classified as STC but actually is a different entity. Radiology of STO shows a calcified soft tissue mass with central mature ossification while histopathology exhibits areas of endochondral ossification with mature trabecular bone. The juxtacortical chondroma is a slow-growing cartilaginous lesion, which arises adjacent to the cortex beneath the periosteum. Subungual exostoses are outgrowths of normal bone or calcified cartilaginous remains; the histopathology shows formation of trabecular bone in the base of the lesion covered by a fibrocartilaginous layer. Enchondroma is frequently asymptomatic but may enlarge and become a painful tumor that expands the tip of the finger; radiologically, it shows cortical thinning and enlargement, usually due to unilateral bone cortex defects, but some had both volar and dorsal bone cortex defects. Superficial acral fibromyxoma is a slow-growing, solitary, erythematous, elastic tumor with a striking predilection for the subungual and periungual region of the hands and feet. Histopathologically, the lesions are well-circumscribed but not encapsulated dermal nodules composed of stellate and spindle cells, arranged in a myxoid collagenous matrix. Lipomas can occur in the distal phalanx of the thumb causing a tender and painful swelling and scalloping of the distal bony phalanx; some of them also present single-digit nail clubbing. Histopathologically, it resembled nevus lipomatosus superficialis.³⁻⁴

This individual presenting with an infrequent single-digit nail clubbing due to an STC highlights the adaptive deformability of the nail. Distinction of STC from other subungual neoplasms can be supported by an asymptomatic slow-growing mass, no continuity with the neighboring bone, and mature hyaline cartilage on histology.

References

- 1. Gentles C, Perin J, Berrey H, Griffiths HJ. Soft-tissue chondroma. *Orthopedics* 2007;30:180–243.
- 2. Eun YS, Kim MR, Cho BK, Yoo G, et al. Subungual soft tissue chondroma with nail deformity in a child. *Pediatr Dermatol* 2015;32:132–4.
- 3. Park JH, Lee DY, Kim N. Nail neoplasms. J Dermatol 2017;44:279-87.
- 4. Malhotra K, Nunn T, Chandramohan M, Shanker J. Metatarsal stress fractures secondary to soft-tissue osteochondroma in the foot: case report and literature review. *Foot Ankle Surg* 2011;17:e51-4.
- 5. Hunter AM, Farnell C, Doyle JS. Extraskeletal osteochondroma of the great toe in a teenager. *J Foot Ankle Surg.* 2019;58:807–10.

Siliang Xue, MD* Yusha Chen, MM* Eckart Haneke, MD, PhD† *Department of Dermatovenereology Sichuan University West China Hospital Chengdu, China †Department of Dermatology Inselspital, Bern University Hospital Bern, Switzerland

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of this article on the journal's Web site (www.dermatologicsurgery.org).

The authors have indicated no significant interest with commercial supporters.

This is an open access article distributed under the Creative Commons Attribution License 4.0 (CCBY), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.