LETTER TO THE EDITOR

Intraoperative Dermatoscopic Features of Subungual Exostosis

Dear Editor

Subungual exostosis is described as a benign osteochondral growth localized on the distal phalanx. Some authors consider it as a type of osteochondroma (1). Dermatoscopy is a non-invasive, in vivo diagnostic tool used in the diagnosis of many cutaneous conditions including nail disorders. Intraoperative dermatoscopy is rather a new method particularly used in the diagnosis of nail diseases. Here we report preoperative and intraoperative dermatoscopic features of a case of subungual exostosis confirmed histopathologically and radiologically.

A 19-year-old female presented with a painful subungual mass on the left big toenail elevating the nail plate. The lesion was first noticed 8 months ago. The patient was referred to our department with a preliminary diagnosis of the viral wart. Polarized dermatoscopic examination of the nail plate showed ill-defined distal white structureless area while the dermatoscopy of hyponychium revealed hyperkeratosis and blood spots [Figure 1]. A foot X-ray was performed which showed a bony protrusion originating from the distal phalanx of the hallux. The nail plate was removed to perform an incisional biopsy. Intraoperative dermatoscopic examination of the lesion showed a bright white and yellowish structureless areas, thick branched and twisted complex looped vessels located on the proximal edge of the lesion [Figure 2]. Histopathological examination of the biopsy specimen revealed trabecular bone formation with a peripheral layer of immature

Figure 1. A subungual mass on the left big toenail elevating the nail plate (a) Preoperative nail plate dermoscopy shows ill-defined white structureless areas (b) Preoperative free nail edge dermoscopy shows hyperkeratosis and rare blood spots (c).

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cartilage and mesenchymal cell proliferation in the reticular dermis [Figure 3]. A diagnosis of subungual exostosis was made along with clinical, dermatoscopic, radiologic and histopathological correlation.

The exact etiopathogenesis of subungual exostosis is unknown. However, trauma, chronic irritation and, chronic infections have been accused(2). Our patient had no relevant history of trauma or infection.

White to yellow discoloration, hyperkeratosis, blood spots, vascular ectasia, onycholysis and, ulceration are the reported dermatoscopic features of subungual exostosis (2, 3). All these features are nonspecific and can be seen in any subungual growth. Subungual glomus tumor, subungual fibroma, subungual squamous cell carcinoma and subungual melanoma may be considered the main differential diagnoses of subungual exostosis.

The nail plate prevents observing the true clinical and dermatoscopic nature of the subungual conditions. Although, nail plate and free nail edge dermatoscopy can provide some clues to the diagnosis of many disorders involving nail unit, direct examination of the subungual lesions after the nail plate removal may open a new horizon. Intraoperative dermatoscopy is a relatively new method making direct dermatoscopic evaluation of the nail bed and nail matrix possible. The method aims to get more reliable dermatoscopic information which may enhance diagnostic accuracy. Intraoperative dermatoscopic features of few nail conditions including longitudinal melanonychia, onychomatricoma, subungual squamous cell carcinoma and subungual glomus tumor have been reported in the relevant literature (4-7). Intraoperative dermatoscopic examination of the present case showed white to yellowish structureless areas and a complex vessel pattern which was totally absent on the preoperative examination. We thought that white and yellow structureless areas may be histopathological counterparts of the bone and cartilage proliferation, respectively while the prominent vessel pattern corresponds to ectatic vascular structures in the superficial dermis.

Figure 2. Intraoperative dermoscopy shows white and yellowish structureless areas, thick branched and twisted complex looped vessels located on the proximal edge of the lesion.

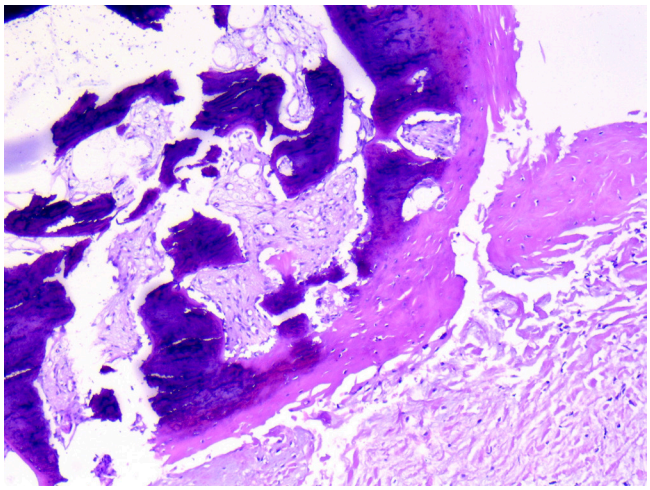

Figure 3. Histopathological examination showed trabecular bone formation with a peripheral layer of immature cartilage localized in the reticular dermis (H&E, x50).

Göktay et al reported intraoperative dermatoscopic features of a case of subungual squamous cell carcinoma as a polymorphous vascular pattern over a pink background (6). Intraoperative dermatoscopic features of subungual glomus tumor were reported as “a pinkish tumor with marked telangiectasia” (7). Sagrada Familia sign, digitations and mirror signs were reported as intraoperative dermatoscopic features for onychomatricoma which seem quite different from those of the present case (5).

To the best of our knowledge, intraoperative dermatoscopic features of subungual exostosis have never been identified previously. It is obvious that further studies are needed to demonstrate diagnostic value of the intraoperative dermatoscopic features for the subungual lesions including subungual exostosis.

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