

Delayed diagnosis of metastatic squamous cell carcinoma presenting as mild subungual bleeding

Dear Editor,

Subungual squamous cell carcinoma (Subungual SCC) is a rare neoplasm of the skin. Diagnosis of subungual SCC is often challenging given the resemblance to other common nail diseases, such as paronychia, onychomycosis, and papilloma. Herein, we report the case of a 62-year-old woman with a 3-year history of indolent subungual bleeding from the right ring finger. Similar symptoms had also been present 10 years ago affecting the same nail. A lymph node biopsy of the right axillary and supraclavicular lymph nodes confirmed a diagnosis of squamous cell carcinoma (SCC) of epithelial origin. She received chemotherapy which led to a temporary improvement in the subungual lesion followed by a recurrence for which the patient was referred to us 3 years ago. At the presentation, there was an irregular scaly plaque affecting the hyponychium of the right ring finger with occasional bleeding, accompanied by a localised thick yellow nail plate [Figure 1a]. Dermoscopy in the polarised

mode revealed a pink, translucent structureless area, a nail plate with free edge thickening, a fuzzy lesion edge, and subungual bleeding accompanied by white scales and yellow keratinous crusts [Figure 1b]. A nail bed biopsy showed dyskeratotic cells, atypical keratinocytes, and an irregularly thickened epithelium [Figure 1c]. Positron emission tomography-computed tomography (PET-CT) showed no visceral malignancy and a positive uptake in the right ring finger [Figures 2a–2d]. The lesion was excised by distal digit amputation. The pathologic evaluation was diagnostic of SCC with axillary metastases [Figure 3].

Subungual bleeding could be caused by trauma, dermatoses, tumour, vasculitis, drug reactions, or infectious diseases.¹ Traumatic subungual bleeding usually presents as black discoloration located distally in most patients; however, lesions are more red and more proximal in patients with systemic diseases.¹ Subungual SCC should be suspected in patients with long-term recurrent nail disease that does



Figure 1a: Distal onycholysis of the ring fingernail of the right hand.



Figure 1b: Dermoscopy revealed a pink background, a translucent area without structures, localized nail plate free edge thickening, a fuzzy lesion edge, and subungual bleeding, accompanied by white scales and yellow keratinous crusts (polarised magnification x50, Guangzhou Chuanghong Medical Technology).

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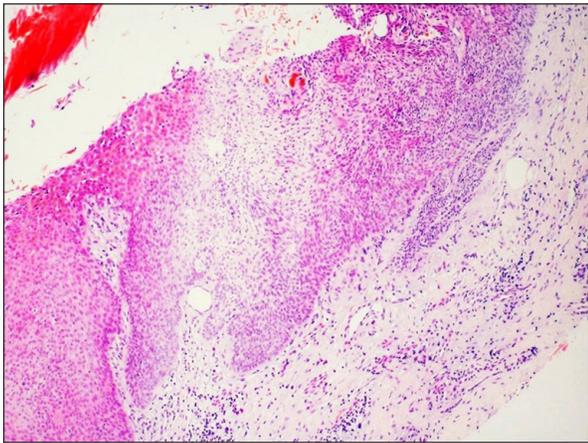


Figure 1c: Nail apparatus pathology showed irregularly thickened epithelium and obvious atypia (Haematoxylin and Eosin; 200x).

not respond to treatment. In this case, the patient presented with long-term recurrent indolent subungual bleeding, and there was no history of trauma. Dermoscopy and biopsy are indicated at the earliest possible once this suspicion arises. There are no diagnostic criteria for dermoscopic characterisation of subungual SCC. Common dermoscopic features include a pink background, translucent structureless areas, white scales, and dotted or irregular vessels.² Our patient showed most of these features except vascular structures. Subungual SCC's are generally considered low-grade malignancies with a low propensity to metastasize. However, there are usually delays in the diagnosis, which results in delayed treatment.³ Huang *et al.*⁴ reported a patient who presented with metastatic SCC in the left groin 3 years following his first diagnosis of a subungual SCC presenting on his left fifth toe. Dalle *et al.*⁵ reported a median delay in



Figure 2a: Transverse axial Computed Tomography (CT) images before distal amputation highlight the position of the lesion.

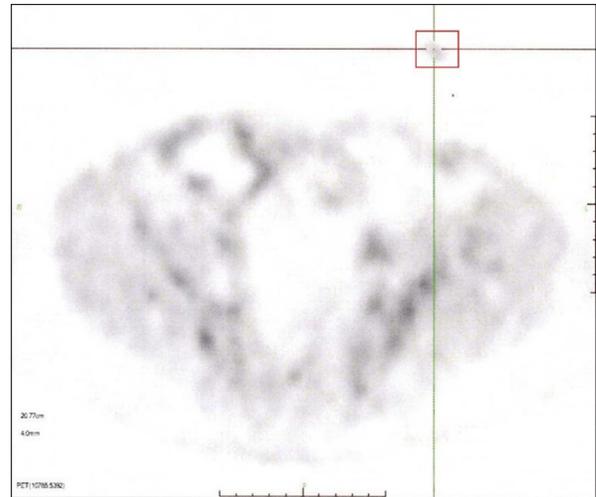


Figure 2b: Transverse axial scanning demonstrates hypermetabolic lesions with PET image (Red square showed the position of right ring fingernail).



Figure 2c: Fusion image of CT and PET scanning showed hypermetabolic lesions of the right ring fingernail.



Figure 2d: PET image in the coronal plane scanning shows the lesion in the right ring fingernail. (Highlighted in the red square).

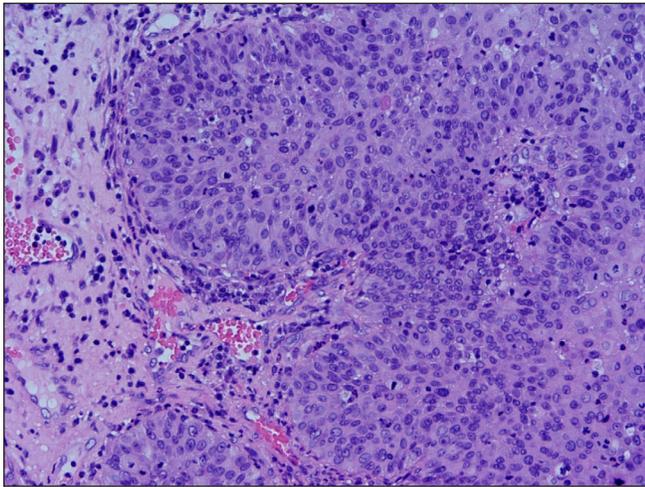


Figure 3: Postoperative pathology displayed disordered architecture with nests of heterotypic cells (Haematoxylin and Eosin; 200).

diagnosis of subungual SCC to be 24.5 months. One of the 35 patients in this series died from lung metastases.

Though there are currently no established treatment guidelines for subungual SCC, it is generally accepted that most can be successfully treated with surgical excision.³ When there is no involvement of the distal phalangeal bone, Mohs surgery and wide surgical excision can be performed whereas amputation of the distal phalanx or disarticulation of the involved digit is often indicated for invasive disease.³ Metastatic tumours, in addition, require block dissection of the regional lymph nodes, postoperative irradiation of the draining lymph nodes, and systemic chemotherapy.⁶ Kelly *et al.*⁷ suggested that early management of metastatic disease with complete lymphadenectomy or radiation is strongly recommended. This was the treatment plan followed in our patient too.

This case illustrates the significance of a thorough history and physical examination to allow early and accurate diagnosis of subungual SCC for a better prognostic outcome. Furthermore, although it metastasises rarely, physicians must be aware of this possibility.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent and we thank the patient for granting permission to publish the information.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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References

- Haber R, Khoury R, Kechichian E, Tomb R. Splinter hemorrhages of the nails: A systematic review of clinical features and associated conditions. *Int J Dermatol* 2016;55:1304–10.
- Carlioz V, Perier-Muzet M, Debarbieux S, Amini-Adle M, Dalle S, Duru G, *et al.* Intraoperative dermoscopy features of subungual squamous cell carcinoma: A study of 53 cases. *Clin Exp Dermatol* 2021;46:82–8.
- Dijksterhuis A, Friedeman E, van der Heijden B. Squamous cell carcinoma of the nail unit: Review of the literature. *J Hand Surg Am* 2018;43:374.e2–379.e2.
- Huang KC, Hsu RWW, Lee KF, Li YY. Late inguinal metastasis of a well-differentiated subungual squamous cell carcinoma after radical toe amputation. *Dermatol Surg* 2005;31:784–6.
- Dalle S, Depape L, Phan A, Balme B, Ronger-Savle S, Thomas L. Squamous cell carcinoma of the nail apparatus: Clinicopathological study of 35 cases. *Br J Dermatol* 2007;156:871–4.
- Lai CS, Lin SD, Tsai CW, Chou CK. Squamous cell carcinoma of the nail bed. *Cutis* 1996;57:341–5.
- Kelly KJ, Kalani AD, Storrs S, Montenegro G, Fan C, Lee MH, *et al.* Subungual squamous cell carcinoma of the toe: Working toward a standardized therapeutic approach. *J Surg Educ* 2008;65:297–301.