Periungual tumor on the finger

Sir,

An apparently healthy 73-year-old man presented with a slow-growing mass, 1.0-cm in diameter, affecting the periungual region of his left middle finger, with ulceration and rolled out edges for three years. The lesion gradually invaded his nail to cause nail-bed hyperkeratosis [Figure 1]. Lesional histopathology revealed nodules of basaloid cells (small cells having minimal cytoplasm with uniform round or oval darkly staining nuclei) interspersed with palisading and stromal retraction; predominantly affecting the upper dermis with epidermal intrusion [Figure 2a and b]. Tumor cells stained negative for epithelial membrane antigen [Figure 2c] and Sox2, and positive for Ber-EP4 [Figure 2d], thus confirming the diagnosis of basal cell carcinoma. We performed Mohs micrographic surgery [Figure 3a]. No recurrence has been noted at one-year follow-up [Figure 3b].

Basal cell carcinoma is the commonest skin neoplasm, but the least common nail tumor.[1] It predominantly affects the head and neck region,[2] nail unit involvement being extremely rare with only 31 reports in the English literature.[1-3] Fingers are involved more than toes, thumb being the commonest digit.[1]

Basal cell carcinoma is primarily caused by ultraviolet radiation, however, the rarity of nail unit basal cell carcinoma despite digits being relatively well sun-exposed remains unexplained.[1,3] The paucity of pilosebaceous units in this region might be a possible reason.[4] Some factors implicated for the etiopathogenesis of nail unit basal cell carcinoma include trauma, carcinogens (azo dyes and arsenic) and chronic radiation exposure.[1]

The clinical presentation of nail unit basal cell carcinoma is variable, resembling several inflammatory or infectious diseases of the nail including chronic paronychia, dermatophytosis, bacterial infections, herpes simplex, chronic eczema and trauma. Differential diagnoses also include other benign or malignant neoplasms like pyogenic granuloma, squamous cell carcinoma, Bowen's disease, glomus tumor and longitudinal melanonychia or melanoma.[3,5] It can also be misdiagnosed as a habit tic.[6] Characteristic dermoscopic features of basal cell carcinoma help us to rule out other clinical mimickers, however, histopathological examination is essential for diagnosis.[3]

Various therapeutic modalities exist for this condition like topical imiquimod, topical 5-fluorouracil, intralesional interferon, radiation therapy, electrodessication and curettage, cryosurgery, laser, standard excision and Mohs micrographic surgery.[2] Surgical excision is the treatment of choice due to lowest rate of recurrence.[2] Compared to standard surgical excision, Mohs micrographic surgery ensures better tissue conservation and marginal clearance, thus resulting in maximum preservation of digital function.[1] As a result, Mohs micrographic surgery is currently the most favoured treatment option for nail unit basal cell carcinoma where tissue conservation is important. Forman *et al*. concluded that 8 of the initial 22 reported cases of nail unit basal cell carcinoma were successfully treated with Mohs micrographic surgery.[5] Five cases healed by second intention while three cases required full-thickness skin grafts.[5] Until now, Mohs micrographic surgery has been performed for 14 nail unit basal cell carcinomas in English literature, including our case. In conclusion, Mohs micrographic surgery is a satisfactory treatment option for nail unit epithelial neoplasms, including basal cell carcinoma.

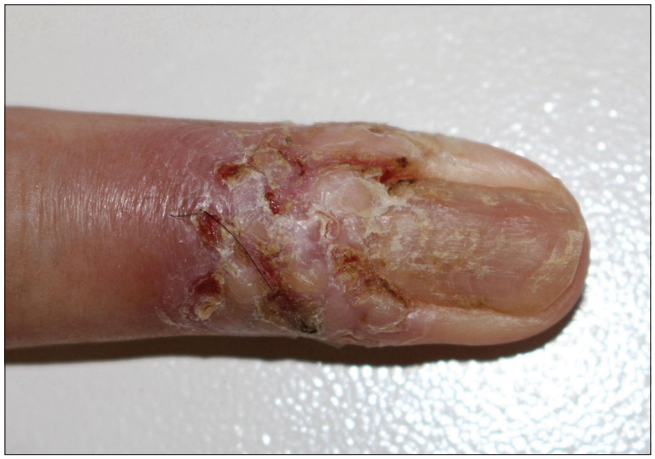

Figure 1: A 1.0 cm mass in the periungual region of the middle finger, with ulceration and rolled out edges and hyperkeratosis of the nail bed

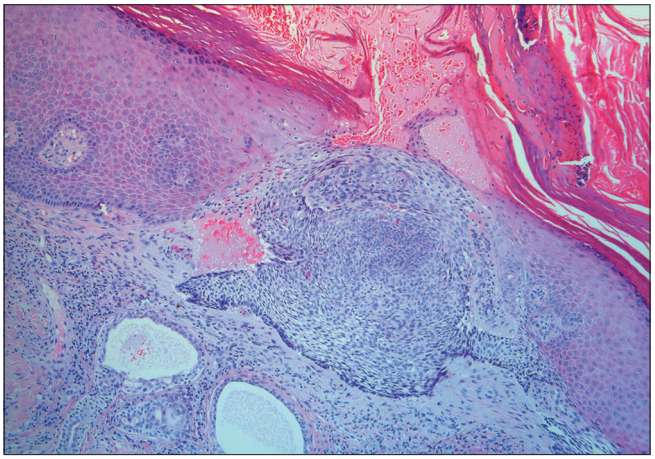

Figure 2a: Scanner view photomicrograph of the lesion shows that the lobules of basaloid cells in the upper dermis are connected to the epidermis, exhibiting peripheral palisading and focal stromal retraction (H and E, ×100)

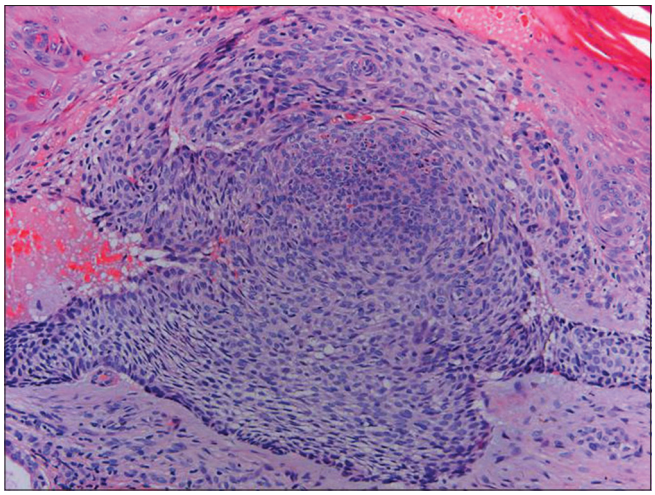

Figure 2b: The comprising cells are small with uniform round or oval darkly staining nuclei and minimal cytoplasm (H and E, ×200)

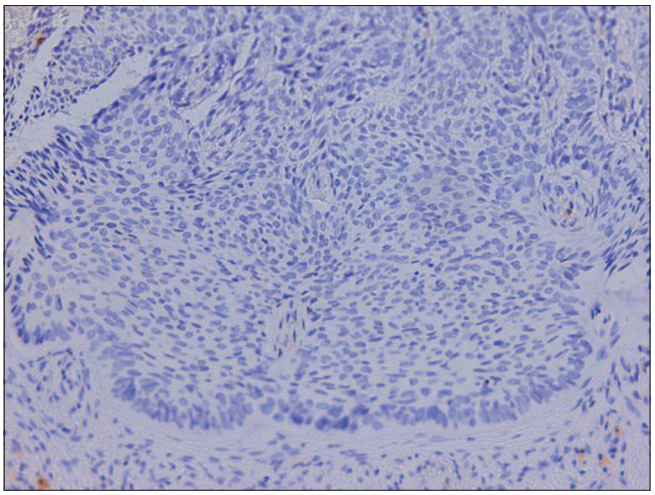

Figure 2c: The tumor cells are negative for epithelial membrane antigen (EMA, ×200)

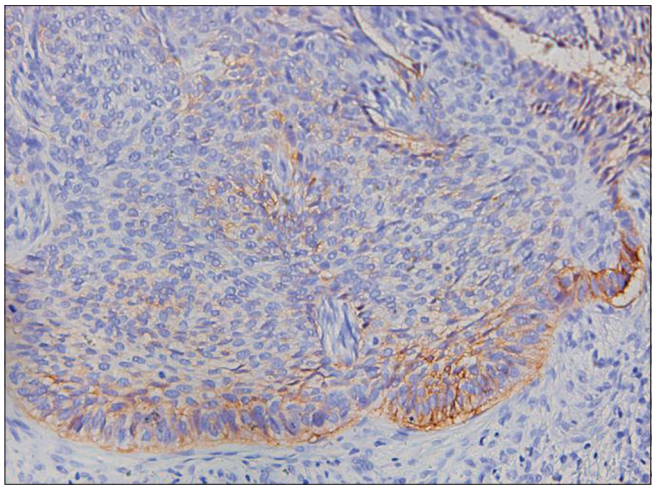

Figure 2d: The tumor cells are focally positive for Ber-EP4+ (×200)

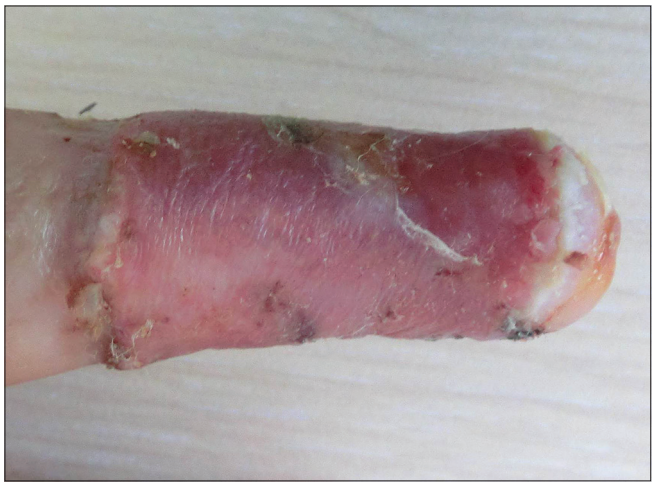

Figure 3a: The appearance of the finger, 25 days after skin graft and removal of tumor by Mohs micrographic surgery

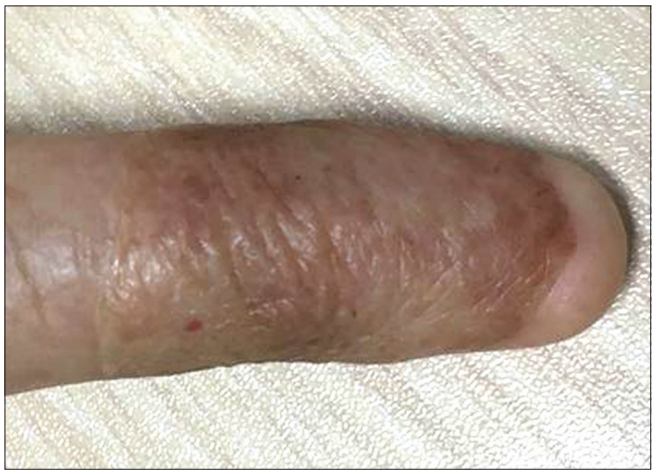

Figure 3b: No recurrence after one-year follow up post-Mohs micrographic surgery

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal the identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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