Case study

Advanced squamous cell carcinoma of the thumb nail bed taken for onychomycosis: a case study

Abstract

Squamous cell carcinoma of the nail bed is a rare tumour, several risk factors are incriminated in the genesis of this tumour: microtrauma, x-rays, arsenic, dyskeratoses and infections (HPV). It is a slow-growing local tumour, often neglected and considered as an onychomycosis leading to local extension and sometimes distant metastasis. We present a new case of periungual carcinoma of the left thumb in a 65 year old patient with a 10 year history of onychomycosis which progressed to local bone extension requiring amputation of the thumb. The objective of this work is to recall the epidemiological, diagnostic and therapeutic particularities of this rare tumour, to insist on the practice of biopsy in front of any nail lesion in order to make the diagnosis and the management in time to avoid the local extension and the metastases.

Key words: carcinoma, nail, onychomycosis, finger, hand.

Introduction

Spino cellular carcinoma (SCC) of the nail bed is a rare tumour, first described by Velpeaux in 1850 (1), which is characterised by a slow local evolution with rare metastases (2). The diagnosis is sometimes difficult and is confused with infectious, mycotic or benign nail lesions, leading to local bone extension and sometimes metastasis. We report a new representative case of periungual SCC of the left thumb diagnosed at the stage of phalangeal bone extension requiring amputation. The objective of this work is to specify the etiological, diagnostic, evolutionary and therapeutic particularities of this lesion with a review of the literature.

Case presentation

Mr B.S, 65 years old, retired, right-handed, presented with a dystrophic lesion of the left thumb nail that had been evolving for 10 years and was treated as onychomycosis. The patient came to us with signs of peri-nail inflammation and pain in the thumb. The interrogation found the notion of repetitive microtraumatisms of the distal left thumb during the thumb-index pinch during his work.

The clinical examination showed a hyperkeratotic swelling of the left thumb, verrucous, budding, with a nail dystrophy (Fig1).

The radiograph showed bony involvement of the second phalanx of the left thumb (Fig. 2).

The extension workup showed no satellite adenopathies or other secondary locations.

The biopsy showed the presence of a well-differentiated infiltrating squamous cell carcinoma of the nail bed with matrix involvement and deep extension.

In view of the extension of the tumour and the bone involvement and the absence of distant metastases, we performed a curative treatment consisting of a trans-head amputation of P2 of the thumb (figure 3).

The evolution was good with healing after three weeks and good functional and aesthetic results. No local or distant recurrence was noted at the last follow-up.

DISCUSSION

Since the first description, a few isolated cases or small series of spino cellular carcinoma of the nail apparatus have been published.

Several aetiological factors are incriminated in the genesis of this tumour: traumatic (microtrauma), chronic or viral infections (HPV 16) (1); X-rays; chemical agents (arsenic) and dyskeratotic skin lesions (3, 4, 5).

Nail bed SCC is a slow-growing, localized tumour. Bone invasion is rare and late, and lymphatic metastases are exceptional. A case of metastasis to the median nerve has been reported (6). Squamous cell carcinoma of the nail bed may be a secondary metastasis of another digestive tumour requiring a general examination for a primary tumour (7, 8)

The differential diagnosis is with dermatological conditions (kerato acanthoma, Bowen's disease) and infections such as perionyxis or panariasis (9).

The treatment is surgical, consisting of tumour removal with a 4-5 mm margin of removal (8). Amputation of the distal phalanx is indicated if there is bony involvement (10). Other conservative techniques have been practised; some authors perform controlled microscopic excision of MOHS (11, 12, 13, 14); radiotherapy is used for advanced cases or in cases where surgery is contraindicated. The residual tissue loss after excision can be resolved by directed wound healing, total skin grafting or reconstruction with local flaps, depending on the site, extent of tissue loss and exposure of underlying noble elements (15).

The evolution is often favourable; recurrences are rare in relation to incomplete excision (16).

Conclusion

Periungual spinal cell carcinoma is a rare tumour with local malignancy.

Early diagnosis by systematic biopsy of dyskeratotic lesions or chronic periungual infections allows for carcinological surgical excision and avoidance of recurrence and metastases which are rare but serious.

Ethical Approval:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

Consent

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

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Figures

Figure 1 : clinical aspect of the right thumb (pre-operative)

Figure 2 : X-Ray of the right thumb

Figure 3 : Clinical aspect of the right thumb (post- operative)