CASE REPORTS

If it is not healing, do worry about it!

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SUMMARY

We present the case of a 44-year-old patient who crushed her ring finger in a door 4 months earlier. She was treated in the community for her chronic fingertip wound/pyogenic granuloma. As the lesion was not healing with regular wound management she was eventually referred to secondary care for an opinion. She underwent immediate excisional biopsy with safe margins for tissue diagnosis and had histological confirmation of an advanced malignant melanoma. The staging head, neck, thorax, abdomen and pelvic CT showed lymph node enlargement and widespread metastatic lesions. Our case shows how if hand lesions are not resolved following trauma, the patient needs to be assessed for unusual pathologies and, if necessary, or in doubt, referred to the specialists.

BACKGROUND

Hand injuries are very common especially in the young working population and are present in 20% of patients attending accident and emergency departments.¹ Most of the typical cases are easily dealt within the community. However some unusual cases could potentially be misdiagnosed. Should the lesion have a malignant nature, the delay in referral could have potentially disastrous consequences for the patient.

In this case, the lesion was initially misdiagnosed as a pyogenic granuloma, which is common, benign, acquired and vascular in nature, arising on the skin or mucous membranes.² These lesions although do occur following trauma, are slow growing and relatively easy to manage with serial wound toilet and, if needed, chemical cautery. On the other hand, melanomas are aggressive, and early detection and intervention are crucial for prognosis and survival.³

CASE PRESENTATION

A 44-year-old woman, with no medical history, was referred to the oncall orthopaedic team for a fungating lesion over the right ring finger distal interphalangeal joint and distal phalanx following trauma 4 months ago (figure 1). She had no nail plate/nail bed as the lesion had already destroyed all the normal fingertip anatomy (figure 2). The lesion was initially managed conservatively with a working diagnosis of a pyogenic granuloma with regular dressings and painkillers. The patient herself was 'embarrassed' about the appearance and the smell of her finger and did not actively pursue her treatment. The lesion increased in size and eventually she was referred to the secondary care 4 months later with a necrotic and infected finger. Her x-rays revealed an affected distal

interphalangeal joint but overall 'normal' bony anatomy (figures 3 and 4). She was taken to the theatre, the next day, for debridement and tissue diagnosis. Intraoperatively, the lesion had a black core and measured 4×4×6 cm involved the distal interphalangeal joint. The histology confirmed an ulcerated fungating malignant melanoma, which was at least 8 mm thick. Postoperatively, a staging head, neck, thorax, abdomen and pelvis CT, with and without contrast, was performed, which showed widespread disease with lung metastasis, soft tissue lesions within the pelvis and mediastinal lymph nodes.

INVESTIGATIONS

- ▶ Anteroposterior and Lat radiographs of the affected finger
- ▶ Excisional biopsy and tissue diagnosis confirming a fungating malignant melanoma
- ▶ Staging head, neck, thorax, abdomen and pelvis CT scan

DIFFERENTIAL DIAGNOSIS

- ▶ Chronic wound
- ▶ Atypical infections
- ▶ Pyogenic granuloma
- ▶ Squamous cell carcinoma

TREATMENT

Excisional biopsy of the lesion with safe margins.

OUTCOME AND FOLLOW-UP

Case discussed in multidisciplinary regional melanoma meeting. Extremely poor prognosis due to the widespread metastatic spread due to delayed presentation.

DISCUSSION

The incidence of melanomas is rapidly rising so that melanomas are now the most common form of cancer in young adults aged 25–29.⁴

It is still unclear whether mechanical trauma is a cofactor in the pathogenesis of melanomas. Recent evidence suggests that in early wound healing, oncogenes are activated and tumour suppressor genes are temporarily suppressed.⁵ Some have noticed a clinical relationship between thermal burns and melanomas,⁶ whereas others have shown no link in trauma settings at all.⁷ It might well be that the trauma is not the actual cause of the melanoma, but the factor that brings attention to a recent or long-standing pigmented lesion.⁸

Historically, the ABCDEF abbreviation (asymmetry, border irregularity, colour variation, diameter greater than 6 mm, evolution) has been used to describe macroscopic features. However as they do

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Figure 1 Frontal view photo of melanoma: the lesion had a black core and measured 4×4×6 cm and involved the distal interphalangeal joint.

Figure 2 Lateral view photo of melanoma.

Figure 3 Anteroposterior x-ray of melanoma: x-rays revealed an affected distal interphalangeal joint but overall.

have varied presentations, it is well documented that some are missed on clinical examination alone, specifically if they are not part of the examiner's list of differential diagnoses.⁹ Training and previous clinical experience are shown to improve the index of suspicion and the rate of accurate diagnosis.¹⁰ Overall, if one is suspected, prompt excisional biopsy with safe margins should be done to provide accurate diagnosis, depth and staging.³ According to clinical guidelines produced by the British association of Dermatologists, patients with suspected lesions should be referred urgently to a dermatologist or surgeon with a declared interest in this field of cancer surgery, in line with the 2-week referral standard.¹¹

Figure 4 Lateral x-ray of melanoma.

As in our case, many melanomas are diagnosed once they become larger or ulcerated. But, unfortunately, owing to the aggressive nature of melanomas, late presentations are indicative of much poorer prognosis. High index of suspicion is possibly the most important key factor in early referral and histological diagnosis.

Owing to excellent blood supply of the hand and fingers, more often than not the finger wounds rapidly heal. Some patient factors such as diabetes, vasculitis or autoimmune conditions might compromise an uneventful healing process. Also, there are some known environmental factors (like unusual organisms in marine workers) dictating circumstances around a so-called difficult wound. In a fit and healthy individual with a crush injury to the finger-tip, the natural history is favourable. A complete subacute loss of nail plate due to a growing lesion/mass is always a worrying feature. Although crush injury wounds do heal with

secondary intention, the presence of a difficult 'pyogenic granuloma' is also an unusual feature.

Learning points

- ▶ Unresolving hand lesions following hand trauma should raise the index of suspicion and be investigated further.
- ▶ Referral to a hand-surgery service for subacute/chronic lesions behaving outside the expected natural history is warranted.
- ▶ Patient education is the key factor in those individuals who do like to accept the responsibility of their own wound-care management. This should be encouraged only if regular follow-ups are feasible.

Competing interests None.

Patient consent Obtained.

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