

Case report

Subungual Malignant Melanoma: Difficulty in Early Diagnosis

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Abstract

A rare case of subungual malignant melanoma in a 43-year-old male, with black dystrophic right thumb nail plate with positive Hutchison sign is presented. Early detection in malignant melanoma is vital for improved treatment outcomes and prognosis. Subungual melanoma presents in a more disguised manner than cutaneous lesions and therefore requires increased vigilance and awareness. Patient underwent disarticulation just distal to the proximal interphalangeal joint. Histopathology confirmed malignant melanoma, and resection free of tumour cells. Our case highlights how any pigmented lesions within the nail bed matrix should raise suspicion and the need for early referral and biopsy.

Keywords : Lymph node metastasis, Melanoma, Hutchinsons

Introduction

Subungual melanoma is a rare type of skin cancer. It accounts for 23% of melanomas in the Japanese population, 25% in the Afro-Caribbean population and 1–3% in the White population. Overall, 62% of lesions present on the fingernails with 38% presenting in toe nails. An unresolving subungual lesion of any kind should raise a suspicion until proven otherwise and warrant early referral to a skin cancer specialist unit. A biopsy of the lesion is warranted as soon as possible along with a thorough clinical examination of regional and distant lymph nodes¹⁻⁷.

Case presentation

Patient is a 43-year-old right hand dominant male who sustained an injury to his right thumb from a sweeping machine while working. The patient presented 6 years after the initial injury to a local practitioner when he noticed a black discolouration under his thumb nail and it was treated with some local antibiotic creams. However, as the lesion grew rapidly for past 6 months and was painful the patient visited our hospital. A punch biopsy was taken of an irregular pigmented lesion in the nail bed. Malignant melanoma was diagnosed after a histological examination which revealed atypical

epithelioid melanocytes that were positive for S-100, Melan A and HMB-45 (Clark's level V). There were no palpable lymph nodes He underwent amputation of his right thumb at the proximal one-third of the metacarpal bone.

Discussion

Subungual melanoma is a rare type of skin cancer. It accounts for 23% of melanomas in the Japanese population, 25% in the Afro-Caribbean population and 1–3% in the White population. Overall, 62% of lesions present on the fingernails with 38% presenting in toe nails⁷. Subungual haematoma may result from a single heavy trauma or repeated microtrauma which often escapes notice. Although oval in shape, it does not form a neat streak. Melanin pigmentation in the form of a longitudinal streak in the nail is due to a pigment-producing focus of melanocytes in the matrix^{1,3}. Diagnosis is often delayed in those with subungual melanoma with patients going on to have a poorer prognosis than those with cutaneous melanoma For the early detection and thus survival of patients of sub unguual malanoma, the ABCDF rule of sub unguual malanoma was devised⁴. In this system, A stands for age (peak incidence being in the 5th to 7th decades of life) and African Americans, Asians

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and native Americans in whom sub ungual melanoma accounts for upto 1/3rd of all melanoma cases. B stands for brown to black and with breadth of 3 mm or more and variegated borders. C stands for change in the nail band or lack of change in the nail morphology despite adequate treatment. D stands for the digit most commonly involved, E stands for the extension of the pigment onto the proximal and/or lateral nail fold (i.e., Hutchinson's sign) and F stands for family or personal history of dysplastic nevus or melanoma. It has been suggested that the diagnostic delay for subungual melanoma can be as great as 30 months⁵. It is also believed that traumatic injury may be the initial cause for developing subungual melanoma⁶. In both of our cases, we are unsure of whether trauma is the cause of the subungual melanoma, or whether the injury brought a pre-existing lesion to light.

Histological diagnosis is the most definitive way of identifying such a lesion and can prevent significant morbidity and mortality⁵. Suspicious signs to be aware of are nail fold pigmentation (Hutchinson's sign), lifting off of the nail from the nail bed and ulcerating lesions that do not heal⁵.

Elective lymph node dissection is a much-debated topic in the management of melanoma. Proponents have cited retrospective studies demonstrating improved prognosis for patients with intermediate thickness (1–4 mm) lesions⁸. Opponents have cited prospective randomized trials that fail to show a statistically significant difference in survival rates following elective lymph node dissection⁹. Subungual malignant melanoma is rare in the Indian set up. He should consider himself lucky that there was no apparent metastasis, given the metastatic potential and rapid spread of malignant melanoma. He satisfied criteria ABC and E of Levits rule for clinical detection of subungual melanoma. namely age in 5th decade, black discolouration, change in nail morphology leading to dystrophy of nail plate and positive Hutchinson's sign⁴.

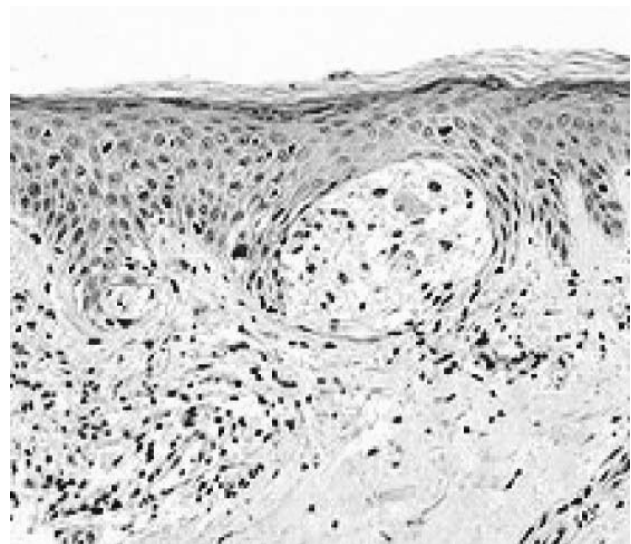
Take home message

Is that an unresolving subungual lesion of any kind should raise a suspicion until proven otherwise and warrant early referral to a skin cancer specialist unit. A biopsy of the lesion is warranted as soon as possible along with a thorough clinical examination of regional and distant lymph nodes.

Figure 1



Figure 2



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