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A RARE CASE OF SUBUNGUAL MELANOMA: A CASE REPORT.

PAUL R[1], KOGILWAIMATH SK[1], CHU YF[1], SASIDHARAN PR[2].

[1]Department of Dermatology, RIPAS Hospital, Brunei Darussalam.
[2]Department of Plastic surgery, RIPAS Hospital, Brunei Darussalam.

ABSTRACT

Subungual melanoma is an uncommon form of acral melanoma that arises within the nail matrix. A 49-year-old male presented with blackish discoloration of nail on the left index finger for a duration of ten years. Histopathology revealed characteristic features of melanoma. A detailed evaluation revealed no features of local or distant metastasis. The entire lesion was then removed surgically along with disarticulation at the interphalangeal joint.

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KEYWORDS: Acral, Hutchinson's sign, Melanoma, Metastasis, Subungual.

INTRODUCTION

Subungual Melanoma (SM) is an uncommon variant of melanoma that arises from the nail matrix and commonly affects other areas of the nail unit. The incidence of subungual melanoma accounts for approximately 2-3% of all cutaneous melanomas. [1,2] No gender predilection is observed. It occurs most commonly between the ages of 50 and 70 years. Overall, two thirds of subungual melanomas present as longitudinal melanonychia, defined as a longitudinally oriented band of brown to black pigment extending the length of nail plate.[3] As subungual melanoma presents with non-specific symptoms, it is often diagnosed late resulting in a poor prognosis, with 5-year survival rates between 16 and 87%.[4] We reported here a rare case of subungual melanoma in a 49-year-old male which was successfully excised along with disarticulation at the interphalangeal joint.

Corresponding author: Dr Sanjay Kumar Kogilwaimath, Department of Dermatology, Raja Isteri Pengiran Anak Saleha Hospital, Brunei Darussalam. Telephone number: +673 7172384; EMAIL ID: sanjay6828@hotmail.com

CASE REPORT

A 49-year-old male presented to Dermatology Department in June 2023 with discoloration of nail on the left index finger for past 10 years. He had no previous medical history and was not on any regular medications.

On examination, there was total melanonychia involving the whole nail plate of left index finger (Figure 1). Hutchinson's sign was negative. Routine bloods like Full blood count, Liver function test, Renal function test and Ultrasound left axilla was done and were unremarkable. Systemic examination was unremarkable with no lymphadenopathy.

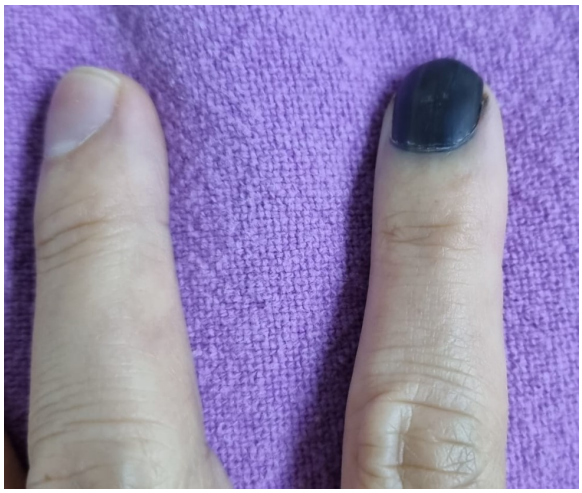

Figure 1: Total melanonychia of left index finger. (Click on image to enlarge)

The patient was referred to Plastic Surgery department, where a nail biopsy was performed. Histopathology showed acanthosis, basal and suprabasal atypical melanocytes and a focal nest of atypical melanocytes, infiltrating into the dermis which were consistent with subungual invasive melanoma (Figure 2). Patient underwent Surgical Terminalisation of left index finger at the level of distal interphalangeal joint and subsequently referred to oncology department and is currently under surveillance.

DISCUSSION

Subungual melanoma is a rare skin cancer and diagnosis is challenging owing to the diversity of its clinical presentations, including band-like black nail discolorations, subungual (amelanotic) masses, and splits of the nail plate.[5] Differential diagnoses include benign melanocytic nevi, subungual hematoma, pyogenic granuloma, discoloration caused by drugs, ingrown toe-nail and onychomycosis. [6,7] In addition to careful clinical examination, dermoscopy (onychoscopy) is becoming an important noninvasive and reliable tool to differentiate between early benign and malignant pigmented nail lesions. Signs on dermoscopy of Subungual Melanoma include irregular bands, disruption in parallelism and pigment on the ridges of the hyponychium. [8]

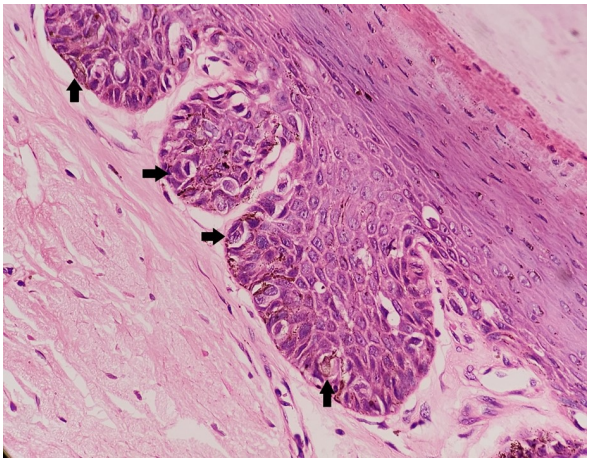

Figure 2: Atypical melanocytes with Pagetoid scatter and junctional nesting at the nail plate. H&E staining (400x). (Click on image to Enlarge)

Histological diagnosis is the most definitive way of diagnosing a melanoma and can prevent significant morbidity and mortality. Suspicious signs to be aware of are nail fold pigmentation(positive Hutchinson's sign, lifting off of the nail from the nail bed, and ulcerations that do not heal. [9] A very useful approach is the 'ABCDEF' rule, for the clinical detection of subungual melanoma as described by Levit et al.[10] The American Joint Committee on Cancer (AJCC) uses the TNM staging system for all cutaneous melanomas, without a separate staging system for Subungual melanomas. Breslow thickness and ulceration status are used to determine the extent of tumor invasion, which indicate disease severity. Clark level was previously included as another measure of tumor invasion but is no longer used by the current AJCC system. [11] The staging of tumour in our patient was pT1a with Breslow thickness of 0.2mm. Hutchinson's sign, which is periungual extension of brown-black pigmentation onto proximal and lateral nailfolds, was negative.

Amputation through the proximal phalanx or the metatarsophalangeal joint is required in the hallux and toes. Fingers require resection through the distal interphalangeal joint. Recently, function-preserving re-

sections in the thumb with nail removal, partial distal phalanx resection, and volar flap reconstruction has been advocated to maximize joint and sensory function, quality of life, and improve cosmesis.[12] Several studies support the use of Mohs Micrographic Surgery (MMS) as a digit-sparing approach for the treatment of NUM, particularly for tumors with a Breslow depth of less than 2 mm. [13]

CONCLUSION

In conclusion, any unresolving subungual lesion of any kind should raise a suspicion until proven otherwise, and early biopsy of the lesion is warranted as soon as possible along with a thorough clinical examination of regional and distant lymph nodes. Early detection in malignant melanoma is vital for improved treatment outcomes and prognosis.

CONFLICTS OF INTEREST

The author's declare no conflict of interest.

PATIENTS CONSENT FOR PUBLICATION

Consent was obtained from the patient for the publication of this case and the images.

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