International Journal of Research in Dermatology
Shah DN et al. Int J Res Dermatol. 2025 Mar;11(2):164-166
http://www.ijord.com

DOI: https://dx.doi.org/10.18203/issn.2455-4529.IntJResDermatol20250437

Case Report

Melanonychia striata with lentiginous pigmentation: a rare case report

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Received: 31 October 2024
Revised: 10 December 2024
Accepted: 18 January 2025

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ABSTRACT

Melanonychia is characterized by brown to black discolouration of nail plate of the finger nail or toe nail due to pigment deposition. The aetiology of melanonychia ranges from benign causes that are nevus and lentigines to a malignant one like melanoma, which is however rare. Other aetiology includes post-traumatic, nutritional deficiency, infections, constitutional etc. We report here; a nine-year-old male child who presented to us with concern of pigmented nail bands. A dermoscopic and histopathological evaluation indicated the presence of an intradermal nevus along with concurrent lentiginous pigmentation, which is a rare occurrence.

Keywords: Colorectal, Carcinoma, Adenocarcinoma, Colonoscopy, Retrospective

INTRODUCTION

Nail pigmentation (Chromonychia) is most commonly caused by deposits of melanin or hemosiderin within the nail plate (melanonychia) and occasionally due to deposits of other pigments of endogenous or exogenous origin. Melanin deposits result from the activation or proliferation of nail matrix melanocytes and in most cases present as a longitudinal pigmented band called longitudinal melanonychia or melanonychia striata. The aetiology of melanonychia includes- constitutional pigmentation in certain races, nail unit trauma, nail-biting, certain Geno dermatosis, endocrine disorders, metabolic conditions, drugs, nail lichen planus, nail psoriasis, nutritional deficiencies, premalignant and malignant conditions.[1] Nail matrix nevus may be congenital or acquired, which is more common in children. Regular parallel lines, a brown background, and granular inclusions characterize melanocytic nevus of the nail apparatus. Visible pigment through a transparent cuticle often produces pseudo-Hutchinson's sign; which may be confused with Hutchinson's sign of melanoma and a cause for anxiety especially in this era of easy availability of information on internet. Lentigo is characterized by melanocytic hyperplasia with the absence of melanocyte nests and it is more common in adults.

CASE REPORT

A 9-year-old boy accompanied by his apprehensive parents presented to dermatology OPD for increasing black bands and dots over right thumbnail in past few months without any associated symptoms. Changes were not present since birth, single strip of pigment was noticed before 10 months, which had gradually increased to the present state. On examination, multiple vertical parallel bands of varied length and of varied color from light brown to blackish interspersed with multiple discrete black to brown-coloured macules over the right thumbnail plate were found. Pseudo-Hutchinson's sign was positive, there were no pigment deposits upon the nail fold (Figure 1a). The child was otherwise completely healthy and local and systemic examination findings were unremarkable. No family history of similar lesion or any malignancy was present. Onychoscopy showed multiple,

parallel, smooth-bordered stripes of varying length and width along with lentiginous pigment dots and pigment seen through proximal nail fold (Figure 1b, c).

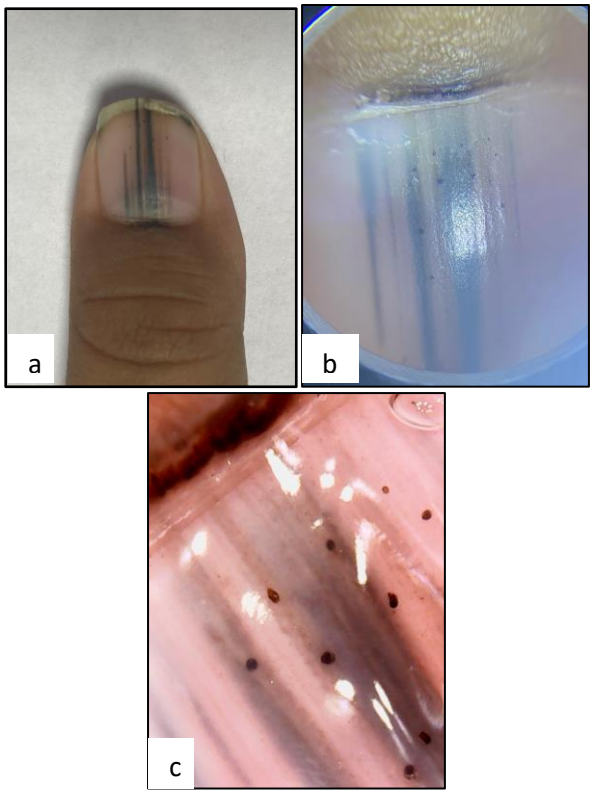

Figure 1: Clinical and onychoscopic findings in the nine-year-old male child in our case report; (a) melanonychia striata with dotted pigment and pseudo-Hutchison's sign; (b, c) onychoscopic findings of smooth bordered, different width brown to black stripes along with lentigens like dots and pigment showing through proximal nail fold.

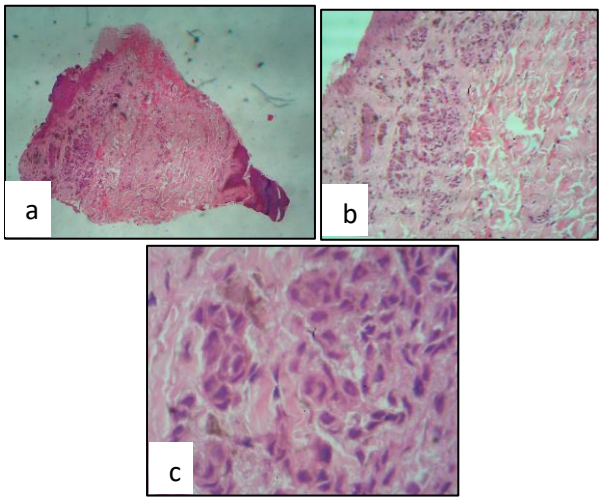

Figure 2: (a, b and c) Histopathology sections (4X, 10X, 40X H&E) showing multiple nests of melanocytes in upper and mid dermis with focal lentiginous pigmentation.

Nail biopsy was performed to confirm the clinical diagnosis of melanocytic nevus and to rule out any malignancy of nail unit. The histopathology revealed intradermal nests of nevus cells with focal lentiginous pigmentation. The nuclei in nevus were vesicular and regular. The surface epithelium showed increased pigment focally at places. There was no evidence of malignant transformation (Figure 2). Clinical and histopathological findings confirmed the diagnosis of nail unit melanocytic nevus along with lentiginous pigmentation which is a rare concomitant finding. As lesion was benign clinically; which was confirmed on histopathology, parents were counselled regarding benign nature of the lesion and regular follow-up was advised for any further change in the lesion. Follow-up after three months did not show any change in the lesion.

DISCUSSION

The percentage distribution of the aforementioned causes of melanonychia varies in different populations, but is because of two phenomena mainly; melanocyte activation and melanocyte proliferation. Singal et al have reported subungual haemorrhage as the most common cause (29.1%), followed by lentigo, trauma, nail matrix nevus, and racial. 5.7% of cases were each caused by benign melanocytic hyperplasia and nail apparatus tumours.[3]

The most important task faced by clinicians is to distinguish benign from malignant aetiologies of nail pigmentation.[1] Nail apparatus nevus is frequently of junctional type and can be acquired or congenital. Nevus accounts for 48% of longitudinal melanonychia in children and 12% of longitudinal melanonychia in adults. On fingernails, particularly the thumb, it typically manifests as a 3-5 mm wide, light brown to black longitudinal band. Although the pigmentation is typically uniform in both hue and intensity, dark bands may appear on a light backdrop; they are best seen with onychoscopy. In one-third of the cases, there is pigmentation seen through proximal nail fold known as pseudo-Hutchinson's sign.

Lentigo is marked by an increase in melanocyte proliferation without the formation of melanocyte nests. Increased melanocytes are present within the nail apparatus. It is more prevalent in adults, accounting for approximately 9% of all cases of longitudinal melanonychia in this population. The main challenge in the management of a patient with melanonychia is to distinguish melanoma from benign conditions (avoiding delayed diagnosis). There is a need for proper guidelines in the management of melanonychia, and to establish the best modality for obtaining a pathological sample from a suspicious lesion.[2]

The young male patient in our case report presented with melanonychia striata of right thumb nail and pseudo-Hutchinson's sign suggestive of melanocytic nevus along with lentigines like pigment dots clinically. On

microscopic examination melanocytic proliferation, characterized by nest formation in the dermis of nail bed along with focal lentiginous pigmentation in basal epithelial tissue was noted. Variations in histological features across different areas of the nail unit can make it challenging to assess the symmetry of the lesion. After extensive review of literature, we found no such case reported till date to the best of our knowledge where two pathologies are seen together.

CONCLUSION

This case represents an uncommon presentation of a nail unit nevus with lentiginous pigmentation. Pigmented bands due to melanocytic nevus is common in Indian children; while lentiginous pigmentation is common in adults. The occurrence of both pathologies together was unmasked with the aid of onychoscopy and supported by histopathological findings. A very few reports of melanoma of nail unit have been reported from India. However, sometimes it is difficult to be sure about the diagnosis and biopsy may be required to confirm the benign nature of the lesion and reassure the anxious patient.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Shah DN, Patel A, Solanki DA, Patel G, Patel KB, Lalchandani D. Melanonychia striata with lentiginous pigmentation: a rare case report. Int J Res Dermatol 2025;11:164-6.