

Case Report

Melanonychia striata: a case report

I. Gede Narendra Yogi Swara Nurasta^{1*}, Putu Anda Tusta Adiputra²,
A. A. Krisna Dwipayana¹

¹Department of Surgery, Prima Medika Hospital, Denpasar, Bali, Indonesia

²Division of Surgical Oncology, Surgery, Udayana University, Sanglah General Hospital, Prima Medika Hospital, Denpasar, Bali, Indonesia

Received: 05 May 2021

Accepted: 19 May 2021

***Correspondence:**

Dr. I. Gede Narendra Yogi Swara Nurasta,
E-mail: narendra_yogi@hotmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Melanonychia striata longitudinalis is a pigmented band in the long axis of the nail. The discoloration occurred because of increase of melanin in the nail matrix. In most cases, especially in children, melanonychia striata is a benign condition. In this case report a 12-years-old male with melanonychia striata. Longitudinal excision was performed with histopathology examination to rule out malignancy and further management.

Keywords: Melanonychia striata, Nail matrix, Benign

INTRODUCTION

Melanonychia striata or longitudinal melanonychia is an abnormal color of nail plate with pigmented (dark-brown tan black) band running in longitudinal axis of the nail. This discoloration of the nail plate is caused by increased melanin production because of increased quantity or function melanocytes in the nail matrix. Bleeding and trauma can cause increased melanin production, besides proliferation and hyperplasia of melanocyte. (A) Prevalence of melanonychia striata ranges from 1.4% in white populations and up to 77% in black populations. (B) Early detection and examination such as histopathology is needed to rule out malignancy in melanonychia striata. In this case report, we presented a case of melanonychia striata in a 12-years-old male.

CASE REPORT

This 12-years-old male patient presented to the Surgical Oncology Clinic of Prima Medika Hospital with one-year history of discoloration of his left ring finger nail (Figure 1).



Figure 1: Melanonychia striata on the left ring nail.

His nail plate turning brownish-black progressively, with no pain or swelling was present. There was no history of trauma and no discharge or itching. The patient was in good condition without taking any medication. There was no history of melanoma, melanonychia striata or other disease of the nail, and other skin diseases in the family. Dermatological examination revealed a longitudinal hyperpigmentation overlying nail plate on left ring nail

with 1 mm width. Proximal nail fold, hyponychium, and periungual area were normal. There was no skin discoloration around the nail. There was no regional lymphadenopathy. Diagnosis of melanonychia striata was made based on physical examination and histopathology result. Specimen for histopathologic examination was obtained from excision of the nail plate and matrix. The result of histopathology showed no proliferation of melanocytes or malignant melanoma. Diagnostic procedures and therapeutic management of this case was done by longitudinal excision of the nail with melanonychia striata.



Figure 2: After partial avulsion procedure of the nail.

DISCUSSION

Melanonychia striata or longitudinal melanonychia is a presence of pigmented (brown or black) longitudinal line along nail plate. Fingernails are affected more often than toenails and more common in the thumb. The discoloration of the nail is of uniform width, whereas melanoma of the nail apparatus is generally wider at the base, tapering distally, and may cause knicking of the distal nail plate. Melanonychia striata may be caused by trauma; medication use [eg. minocycline (Minocin), zidovudine (Retrovir), bleomycin, antimalarials]; and bacterial, fungal, or human immunodeficiency virus infections.^{1,3}

Some cases of melanonychia striata can become subungual melanoma. To exclude malignancy some approaches should be taken such as wait and see or longitudinal excision (chosen for this case). Partial nail avulsion is performed in this case to reduce complications such as infection, pain during activities, and bleeding.⁴ Histopathological finding in this case did not show any proliferation of melanocyte. Increased melanocytes function rather than hyperplasia might have been the reason of discoloration of the nail. Although no

malignancy was found, it is important to perform monitoring and evaluation because of in some cases malignancy lesion can still occur.^{5,6}

CONCLUSION

Melanonychia striata is an abnormal change of nail pigment, mostly as an early stage of subungual melanoma. Thus, early detection such as excision biopsy must be done to rule out malignancy.

ACKNOWLEDGEMENTS

We would like to thank Department of Surgery, Prima Medika General Hospital Denpasar for the support to authors in this work.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Cooper C, Arva NC, Lee C, Yelamos O, Obregon R, Sholl LM, Wagner A, et al. A clinical, histopathologic, and outcome study of melanonychia striata in childhood. *J Am Acad Dermatol.* 2015;72(5):773-9.
2. Burleigh A, Lam JM. Pediatric longitudinal melanonychia. *CMAJ.* 2017;189(34):1093.
3. Lipner SR, Scher RK. Evaluation of nail lines: Color and shape hold clues. *Cleve Clin J Med.* 2016;83(5):385-91.
4. Ren J, Ren M, Kong YY, Lv JJ, Cai X, Kong JC. Clinicopathological diversity and outcome of longitudinal melanonychia in children and adolescents: analysis of 35 cases identified by excision specimens. *Histopathology.* 2020;77(3):380-90.
5. Ruben BS. Pigmented lesions of the nail unit: clinical and histopathologic features. *Semin Cutan Med Surg.* 2010;29(3):148-58.
6. Saraswati N, Sutedja E, Agusni J. Various nail surgery procedures. *J Kedokteran dan Kesehatan.* 2019;8(1):15.

Cite this article as: Nurasta IGNYS, Adiputra PAT, Dwipayana AAK. Melanonychia striata: a case report. *Int J Res Med Sci* 2021;9:1758-9.