Chemotherapy-induced transverse melanonychia

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DESCRIPTION

A 40-year-old man presented with painless swelling of the neck for 3 years. He was well until 3 months prior to the presentation when he started losing weight and feeling lethargic. Clinical examination showed an enlarged left cervical lymph node measuring about 4×4 cm. Lymph node biopsy revealed scattered mononuclear Hodgkin-like cells and binucleated Reed-Sternberg cells with CD30 positivity in keeping with classical Hodgkin lymphoma. Staging Positron emission tomography (PET)-CT scan showed multiple hypermetabolic supradiaphragmatic nodes. Bone marrow aspiration and trephine biopsy were unremarkable. He was then commenced on ABVD chemotherapy (doxorubicin, bleomycin, vinblastine and dacarbazine). Reassessment after three cycles of chemotherapy showed significant clinical and radiological improvement. However, he reported hyperpigmentation of all the nails which had developed 2 months after the commencement of chemotherapy (figure 1). There was no mucosal pigmentation or skin lesion elsewhere. He denied taking any medication or supplement. He was diagnosed with chemotherapy-induced transverse melanonychia.

Melanonychia is a result of increased melanin deposition in the growing nail beds. Transverse, longitudinal and diffuse form of melanonychia have been described.¹ The mechanism of melanonychia can be due to melanocytic activation or melanocytic hyperplasia. Melanonychia affecting multiple nails can be physiological, occurring as a normal variant in skin of colour and during pregnancy. It can be seen in association with certain syndromes and can also occur secondary to local trauma, chronic nail infection, inflammatory skin disease, endocrine disorders, nutritional deficiency, systemic disease, medications, phototherapy and X-ray exposure. Transverse melanonychia is uncommon and frequently observed in association with medications. Chemotherapeutic agents including doxorubicin, bleomycin and dacarbazine have all been recognised to cause transverse melanonychia.² The intermittent cycles of chemotherapy exert direct toxic effects on nail matrix causing melanocytic activation, which leads to the development of transverse melanonychia. It typically resolves after the completion of chemotherapy and warrants no treatment. Interestingly, the occurrence of this clinical sign is not frequently seen in patients receiving

Figure 1 There were transverse pigmented bands of bluish-brown hue in varying degree of intensity involving all the finger nails (A) and toe nails (B), with sparing of the lunula.

chemotherapeutic agents. The sparing of the lunula in transverse melanonychia is also rarely described. Hence, the recognition of this benign nail condition is essential to avoid unnecessary investigation or treatment.

Learning points

- ▶ Melanonychia refers to hyperpigmentation of the nails as a result of increased melanin deposition.
- ▶ The condition may be caused by certain chemotherapeutic agents such as doxorubicin, bleomycin and dacarbazine.
- ▶ Chemotherapy-induced transverse melanonychia is a benign condition and it typically resolves after the completion of chemotherapy.

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REFERENCES

- 1 Hinds G, Thomas VD. Malignancy and cancer treatment-related hair and nail changes. *Dermatol Clin* 2008;26:59–68.
- 2 Jefferson J, Rich P. Melanonychia. *Dermatol Res Pract* 2012;2012:1–8.

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