

Beau's lines

Aditya Jandial, Kundan Mishra, Gaurav Prakash, Pankaj Malhotra

Department of Medicine,
Postgraduate Institute of
Medical Education and
Research, Chandigarh, India

Correspondence to

Dr Kundan Mishra,
mishrak20@rediffmail.com

Accepted 19 March 2018

DESCRIPTION

A 55-year-old male, who received three cycles of rituximab, cyclophosphamide, doxorubicin, vincristine and prednisolone chemotherapy for diffuse large B cell lymphoma, presented with well-defined ridges on fingernails. History was unremarkable for any local symptoms and similar nail changes in the past. On examination, parallel transverse linear depressions were appreciable in all the fingernails and toenails (figure 1) representing Beau's lines. He was reassured regarding their reversible nature. Three months after the completion of chemotherapy, nail changes completely disappeared.

Beau's lines are caused by temporary disruption in the growth of proximal nail matrix. Nail changes are commonly reported by patients receiving anticancer therapy (approx. 23%); vincristine, hydroxyurea, paclitaxel, etoposide, daunorubicin, bleomycin, cyclophosphamide, dacarbazine and methotrexate have been the commonly implicated drugs. Whereas preferential involvement of nailplate and nailbed by cytotoxic chemotherapeutic agents is known,

the targeted anticancer drugs may lead to periungual lesions.¹ Additionally, febrile illness, severe malnutrition, trauma, pemphigus and Raynaud's disease are also frequently associated with Beau's lines.^{1,2} Palpable depression and non-blanchability differentiate Beau's lines from Mees' lines (true leukonychia), Muehrcke's lines (apparent leukonychia) and melanonychia. Magnitude and duration of the insult can be estimated from the depth and longitudinal width of Beau's lines, respectively. Nail plate grows by 1 mm in approximately 6–10 days, and therefore, the distance between Beau's lines and proximal nail fold can provide rough assessment of the timing of the insult.³ It resolves in 3–6 months after chemotherapy. Use of cryotherapy, sunscreens, multivitamins and steroids has shown limited benefit in prevention of chemotherapy-related nail changes.

Learning points

- ▶ Beau's lines are fairly common nail changes in patients on chemotherapy.
- ▶ Beau's lines harbingers variety of medical disorders (benign and malignant).
- ▶ A cause should be searched and once removed it resolves completely.

Contributors All authors were involved in patient management. AJ and KM prepared the manuscript, which was vetted by all authors.

Funding This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

© BMJ Publishing Group Ltd (unless otherwise stated in the text of the article) 2018. All rights reserved. No commercial use is permitted unless otherwise expressly granted.

REFERENCES

- 1 Robert C, Sibaud V, Mateus C, *et al*. Nail toxicities induced by systemic anticancer treatments. *Lancet Oncol* 2015;16:e181–9.
- 2 Hinds G, Thomas VD. Malignancy and cancer treatment-related hair and nail changes. *Dermatol Clin* 2008;26:59–68.
- 3 Piraccini BM, Iorizzo M. Drug reactions affecting the nail unit: diagnosis and management. *Dermatol Clin* 2007;25:215–21.



Figure 1 Clinical photograph of the patient's nail in bird's-eye view showing ridges over nail (A). Side on view showing horizontal ridges with trough in between, typical of Beau's line (B).

 Check for updates

To cite: Jandial A, Mishra K, Prakash G, *et al*. *BMJ Case Rep* Published Online First: [please include Day Month Year]. doi:10.1136/bcr-2018-224978

Copyright 2018 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow