Dermatology Practical & Conceptual

# Docetaxel-Induced Nail Bed Purpura

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## Case Presentation

A 57-year-old male patient presented to our outpatient clinic with reddish discoloration of the nail plates. He was a known case of moderately differentiated adenocarcinoma of the stomach and was on treatment with docetaxel-based chemotherapy (docetaxel 75 mg/m$^2$ and oxaliplatin 130 mg/m$^2$ on day 1 followed by capecitabine 1000 mg/m$^2$ orally twice daily on days 2-14) for the last 2 months. Examination of his nails revealed subungual onycholysis of his bilateral great toes along with nail bed purpura over the third right toe and multiple fingernails (Figure 1A). Dermatoscopy revealed presence of circumscribed red homogenous blotches on multiple fingernails (Figure 1B). Based on the above features, we made a diagnosis of docetaxel-induced nail bed purpura and subungual onycholysis.

## Teaching Point

Docetaxel is a semisynthetic analogue of paclitaxel that acts by binding to beta tubulin subunit of microtubule resulting in its disassembly. Nail changes seen post-treatment with docetaxel-based chemotherapy include onychomadesis, onycholysis, beau's lines, paronychia, and nail bed purpura [1]. The direct toxic insult to the nail bed epithelium results in the formation of hemorrhagic bulla and onycholysis [2]. Secondary infection of the collected blood can also be present, which may present as intense pain due to pressure effect. Under dermatoscopy, hemorrhages would appear as presence of globules of varying colors including purple, violet, and red. Management includes antibiotics for the treatment of paronychia. Nail bed purpura resolves spontaneously after treatment is stopped.

## References

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**Figure 1.** (A) Nail bed purpura over fingernails. (B) Dermatoscopy revealing presence of circumscribed red homogenous blotches on fingernails.