

中文題目:Beau 的指甲線：近期 Docetaxel 和 5-FU 使用的指標

英文題目: Beau's lines in nails: an indicator of recent Docetaxel and 5-FU use

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## **Introduction**

Docetaxel is a chemotherapy agent used in the treatment of solid tumors, including cancers of head and neck, esophagus, stomach, breast and lung. Common side effects of docetaxel include myelosuppression, neuropathy, fatigue, gastrointestinal upset, mucositis, hypersensitivity, fluid retention and skin/nail change. Compared with other chemotherapy agents, taxanes may cause more nail toxicity, including color change, Beau's lines, splinter haemorrhages, and onycholysis. However, few reports have described nail toxicity such as Beau's lines secondary to docetaxel

## **Case Presentation**

A 56-year-old man received gastrectomy and lymph node dissection for gastric adenocarcinoma (pT3N1M0, stage IIIb) but refused adjuvant chemotherapy. Local recurrence with extrahepatic duct involvement happened 18 months thereafter and bile drainage was performed. He then received nine courses of chemotherapy with the XELOX regimen (capecitabine plus oxaliplatin). Due to tumor progression, the regimen was shifted to biweekly docetaxel 40 mg/m<sup>2</sup> plus 5-FU 3000 mg/m<sup>2</sup>. After three courses of treatment, multiple painless horizontal grooves (Beau's lines) were noticed in all fingernails (Figure 1A). About 3 months after chemotherapy was stopped due to poor response and biliary tract infection, the Beau's lines all disappeared (Figure 1B).

## **Discussion**

Beau's line is about 1-2 mm in width, reflecting temporary arrest of proximal nail matrix proliferation caused by several insults, including trauma, systemic diseases and chemotherapy agents. Since the patient has prior exposure to the 5-FU prodrug, capecitabine without experiencing such side effect, the nail toxicity was more likely caused by Docetaxel. However, nail change as a rare side effect of the FOLFOX regimens (5-FU plus oxaliplatin) has been reported. It is possible that there is a synergistic effect of 5-FU and Docetaxel on the nail toxicity. Chemotherapy drugs may temporarily damage the nail matrix and affect the proliferative process. Concurrent use of two or three drugs to achieve a better anti-cancer effect is a common clinical practice. However, side effects are also more common. Transient arrest of nail production causes transverse depressions on the nail plates, also known as Beau's lines. The depth of the depression represents the extent of damage, and the width indicates the duration of the insult. This nail pattern can provide insight into the interval between and intensity of chemotherapy cycles. Drug-induced Beau's lines are usually dose-related and can recur when readministration of the drug is mandated. There is no effective method to prevent its development, but the changes generally resolve as new nails grow. Careful observation of nail plates is advised during Docetaxel treatment, especially when combined with 5-FU.

Figure 1

(A) Multiple painless horizontal grooves (Beau's lines) in all fingernails (B) the Beau's lines all disappeared about 3 months after chemotherapy was stopped

