Acute and Painful Nail Changes after Docetaxel Treatment
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CASE REPORT
A 28-year-old man (patient A) and a 46-year-old female (patient B) were diagnosed as having adenocarcinoma of the lung and received docetaxel chemotherapy to substitute previous regimen (gemcitabine and cisplatin) due to poor response. No significant adverse effects noted until the fourth cycle of docetaxel treatment, both patients developed nail changes. Both had acute nail pain for one week. On examination of patient A, orange discoloration of fingernails without discomfort and painful paronychia of toenails was noted. (Fig. 1) Regarding patient B, acute paronychial change of fingernails with purulent discharge, onycholysis, subungual hemorrhage or yellowish discoloration was present. (Fig. 2) Bacterial culture revealed negative result. The lesions were managed with topical antibiotic ointment. The painful paronychia gradually improved in a few days.

Fig. 1  Fig. 2
Diagnosis: **Docetaxel-Induced Nail Changes**

**DISCUSSION**

Docetaxel (Taxotere®), a semisynthetic taxoid, acts as an antimicrotubule agent and is considered to have great potential in the treatment of breast, ovary and lung cancer. The most common side effects are hematological ones. Skin and nail toxicity is one of the most frequent non-hematological adverse reactions.1

Nail involvement is observed in 26% of docetaxel treated patients. Besides dark pigmentation and Beau’s lines, subungual hemorrhage, orange or yellowish discoloration, painful paronychia, onycholysis, subungual abscess, subungual hyperkeratosis and transverse loss of the nail plate had been described. Nail pigmentation is the most frequent change and usually appears 3-8 weeks after the initiation of chemotherapy. The most frequent reported color of nail pigmentation after receiving docetaxel was yellow or orange discoloration, which was also observed in both of our patients. Acute paronychia is not a frequent finding with antineoplastic drugs but has been described with docetaxel. Of these reported cases, fingernails seemed to be more frequently involved than toenails.2-4

The average time elapsing from treatment to development of the nail changes, varying from 1 to 9 weeks in the previous reports, was 4 weeks in our cases. The regimen of our patients, weekly infusion of docetaxel 36 mg/m² for consecutive 3 weeks followed by 1-week off, was different from those previously reported (110 mg/m² every 3 weeks).2-4 Some investigators have suggested weekly administration of docetaxel at a lower dosage to increase the frequency of exposure of cancer cells to docetaxel as well as to decrease drug toxicity.5 But our presenting cases still developed these manifestations with lower dosage schedule. Similar nail reactions tend to recur during subsequent cycle of docetaxel treatment.2-4 We didn't observe this phenomenon due to alteration of the chemotherapy regimen for the poor response of the docetaxel treatment. More case reports are needed to clarify the relationship between the elapsing time, dosage schedule and the development of the nail changes.

There was no history of previous skin injury or exposure to sunlight over this area in our cases. The negative result of microbial culture and striking symmetry in nail involvement suggested that infection was not a primary event. Except for antiemetics and methylprednisolone, no other drugs were simultaneously given, which had no similar side effects reported. The relation between these nail adverse reactions and docetaxel intake is obvious.

Most of these nail changes described before were treated symptomatically, well tolerated, and didn't necessitate the discontinuation of treatment. Nail regrowth often restarted after the discontinuation of the drug without sequelae. Docetaxel is nowadays widely used, clinicians should recognize the different spectrum of skin and nail changes induced by this new drug.

**REFERENCE**