

## Docetaxel-induced skin toxicity

Dear Editor,

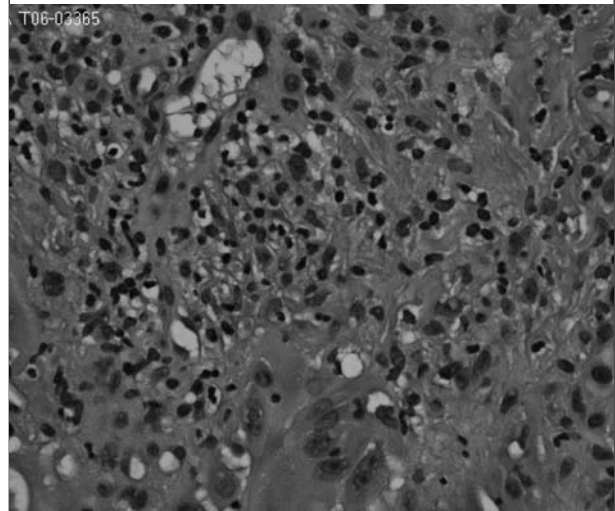
Chemotherapy has an increasing potential for cure and palliation of most forms of cancer in different stages. However, its use is often limited by side effects. We observed two patients with skin toxicity after docetaxel treatment.

Both men were known with irresectable prostate cancer and presented with erythema on their hands after docetaxel treatment. They were treated with androgen-deprivation therapy, but started docetaxel (Taxotere®, 35 mg/m<sup>2</sup> every week) for hormone-refractory disease with metastases. The first patient presented with a painful well-demarcated erythema of the right hand after four administrations of docetaxel. After two days similar lesions appeared on the fingers of the left hand with vesicles and crustae (*figure 1*). Blood cultures showed no growth. Skin biopsy showed hyperkeratosis, loss of the stratum granulosum and acanthosis (*figure 2*). Intra-epidermal ballooning with degeneration, loss of nucleolar basophilia and basal pleomorphism of keratinocytes was seen. Reactive proliferation of small blood vessels in the upper dermis was accompanied by some mononuclear infiltrate. Based on the histological findings and after exclusion of infectious disease the diagnosis of a drug-induced skin toxicity was likely. After permanent discontinuation of docetaxel all skin lesions resolved completely.

**Figure 1.** Erythema and desquamation observed after 4 cycles of weekly docetaxel



**Figure 2.** Microscopic examination of a lesion of the right hand showed hyperkeratosis, loss of the stratum granulosum and acanthosis



The second patient presented with multiple painful red plaques on both hands after 22 administrations of docetaxel. Docetaxel was discontinued promptly, which resulted in complete resolution of the skin eruptions within two weeks.

Chemotherapy with docetaxel is a palliative option for patients with hormone-refractory prostate carcinoma. Skin toxicity due to docetaxel (erythema and exfoliation to diffuse desquamative dermatitis) has been described in studies in breast and ovarian cancer.<sup>1</sup> In a dose-finding study of weekly docetaxel in patients with breast or ovarian cancer, skin toxicity was observed in 10 out of 32 patients (31%) at a dose level of 80 mg/m<sup>2</sup> or higher.<sup>2</sup>

Our observations resemble the palmar-plantar erythrodysesthesia (PPE), also known as hand-foot syndrome, a syndrome of painful dermatitis of the palms and soles following administration of chemotherapy. It is a well-known side effect of 5-fluouracil and capecitabine,<sup>3</sup> but has also been associated with docetaxel,<sup>4</sup> sunitinib and sorafenib. In contrast to PPE, our patients did not report tingling pain in the fingers, and lacked any symptoms of the feet. The underlying mechanism of

PPE and the reason for its particular distribution are unknown. Pyridoxine may decrease the number of dermatological reactions with docetaxel<sup>4</sup> and has been effective in delaying the onset and severity of doxorubicin-associated PPE.

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**REFERENCES**

1. Ten Bokkel Huinink WW, Prove AM, Piccart M, et al. A phase II trial with docetaxel (Taxotere) in second line treatment with chemotherapy for advanced breast cancer. *Ann Oncol.* 1994;5:527-32.
2. Tomiak E, Piccart MJ, Kerger J, et al. Phase I study of docetaxel administered as a 1-hour intravenous infusion on a weekly basis. *J Clin Oncol.* 1994;12:1458-67.
3. Nagore E, Insa A, Sanmartin O. Antineoplastic therapy-induced palmar plantar erythrodysesthesia ("hand-foot") syndrome. *Am J Clin Dermatol.* 2000;1:225-34.
4. Vukelja SJ, Bakir WJ, Burris HA, Keeling JH, Von Hoff D. Pyridoxine therapy for palmar-plantar erythrodysesthesia associated with docetaxel. *J Natl Cancer Instit.* 1993;85:1432-3.

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	<b>Hits</b>
<b>SPECIAL REPORTS</b>	
Q fever in the Netherlands: a concise overview and implications of the largest ongoing outbreak	133
50 years <i>Netherlands Journal of Medicine</i> – 2002, reshaping the journal	73
<b>REVIEWS</b>	
Low level IGF-1 and common variable immune deficiency: an unusual combination	146
Epiglottitis in the adult patient	144
<b>ORIGINAL ARTICLES</b>	
Rationale and design of CAPITA: a RCT of 13-valent conjugated pneumococcal vaccine efficacy among older adults	127
Thyrotoxic periodic paralysis admitted to the medical department in Qatar	102
<b>CASE REPORTS</b>	
Two patients with ciguatera toxicity: a seafood poisoning in travellers to (sub) tropical areas	91
Whipple's disease: easily diagnosed, if considered	111
<b>LETTER TOT THE EDITOR</b>	
Encapsulating peritoneal sclerosis in patients on peritoneal dialysis	82
Response to letter to the editor	56
<b>PHOTO QUIZZES</b>	
Necrosis of small intestine	75
Cavitating lymph node syndrome	86
<b>MONTHLY NJM ONLINE HITLIST</b>	
For all articles published in June 2008	51
<b>Total</b>	<b>1277</b>