

Blistering of the hand in a breast cancer patient

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CASE REPORT

A 48-year-old patient presented with redness and tenderness of the dorsal side of her left hand, which had started two to three days after administration of the third cycle of vinorelbine, which she was receiving as palliative treatment for breast cancer. A week afterwards blisters developed (*figures 1 and 2*).

She was diagnosed with breast cancer in 2005, and in 2007 she developed multiple metastases in ovary, bone and liver. Previously, she had been treated with three lines of hormonal therapy and three lines of chemotherapy. Her medical history was otherwise unremarkable. She had never experienced skin problems before. During administration of vinorelbine no pain or swelling of the hand was noticed.

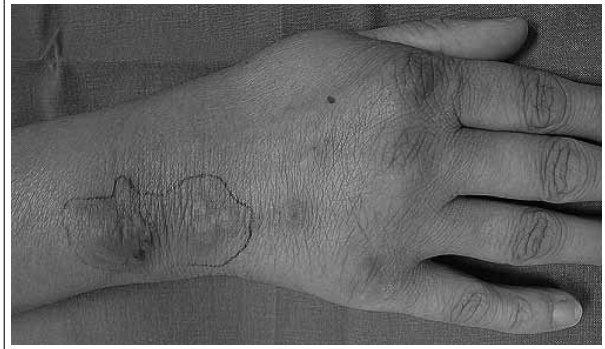
WHAT IS YOUR DIAGNOSIS?

See page 85 for the answer to this photo quiz.

Figure 1.



Figure 2.



DIAGNOSIS

Despite the absence of pain or swelling during infusion of vinorelbine, extravasation of vinorelbine is the most likely cause of the skin lesions. Extravasation trauma can be caused by hypertonic solutions, vasoconstrictive solutions and irritating solutions such as chemotherapeutic agents. The reported incidence of extravasation in intravenously administered chemotherapy ranges from 0.01 and 6%.^{1,2} Vinca alkaloids, such as vinorelbine, are classified as vesicant. Vesicants are chemical compounds that have the ability to cause chemical burns with severe skin damage and blistering. In some cases extravasation leads to skin necrosis, with histopathology showing separation of dermis from necrotic epidermis.³

When discovered early, extravasations can be treated with dilution by subcutaneous flushing with saline. This is preferably done within the first eight hours, but an attempt can still be made within the first 24 hours. In addition, hot packs can help to prevent damage in vinca alkaloids, non-DNA binding vesicants, while cold packs have shown to increase damage in animal studies. In contrast, cold packs can prevent further damage in case of extravasation of DNA-binding vesicants, such as anthracyclines and taxanes.²

In our case the patient did not complain of swelling or pain during infusion. Her complaints started after two days and blistering appeared after nine days. Usually, the most severe extravasation damage is noted days to weeks after extravasation has taken place. Because there were

no symptoms during intravenous administration and the amount of affected skin was limited, probably just a small amount of vinorelbine had extravasated.

As differential diagnosis, non-chemical skin burns and paraneoplastic syndromes such as neutrophilic dermatosis of the dorsal hands (variation of Sweet's syndrome) should be considered. However, our patient had no history of skin burns. Neutrophilic dermatosis usually presents with pustules rather than blisters and is associated with haematological malignancies rather than breast cancer.⁴ The patient was referred to the plastic surgeon for conservative treatment. The wound was treated as a second-degree burn. The wound was dressed with impregnated gauzes, Cuticerin, 7.5 x 7.5 cm and a compress. Her hand recovered well in three weeks.

REFERENCES

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