

# Inflammation of actinic keratoses during paclitaxel chemotherapy

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## DESCRIPTION

A 73-year-old woman with a long-standing history of sun exposure was being treated for breast cancer with paclitaxel chemotherapy. Following the third cycle of chemotherapy, she developed an inflamed, 'sore' rash on her chest. Examination revealed numerous inflamed, hyperkeratotic papules superimposed on an erythematous background on the upper back, anterior upper chest and forearms, in a striking photodistributed pattern (figure 1).

The patient had multiple actinic keratoses (AKs) prior to starting chemotherapy, which became inflamed following instigation of systemic paclitaxel. AKs are the commonest premalignant skin pathology with the potential to progress to squamous cell carcinoma. Inflammatory changes are often observed in patients with AKs taking other chemotherapeutic agents, most notably 5-fluorouracil and capecitabine.<sup>1 2</sup> Following initiation of chemotherapy, patients develop inflammation and pruritus of the AKs, which, if left untreated, continue throughout the duration of chemotherapy and subside following completion of treatment, with apparent resolution of the previously inflamed AKs. The chemotherapy is

presumed to selectively induce DNA damage within sun-damaged keratinocytes.<sup>3</sup>

Physicians should be aware of this potential side-effect of chemotherapeutic agents in patients with previously high sun exposure. Such cutaneous manifestations do not represent an allergic reaction requiring cessation of life-saving chemotherapy, but, rather, indicate elimination of underlying AKs, and can be successfully treated with topical corticosteroids.

## Learning points

- ▶ Actinic keratoses are the commonest premalignant skin lesion with the potential to progress to squamous cell carcinoma.
- ▶ Pre-existing actinic keratoses (typically on sun-exposed sites) may become inflamed following instigation of chemotherapy.
- ▶ This inflammatory response does not necessarily require discontinuation of the chemotherapy, but can be treated with topical corticosteroids.



**Figure 1** Inflammation of actinic keratoses following instigation of paclitaxel chemotherapy.

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**Patient consent** Obtained.

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