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## Flagellate erythema

Flagellate erythema is an uncommon patterned rash, which occurs in linear streaks and usually follows chemotherapy.

### What causes flagellate erythema?

Flagellate erythema was first described in association with bleomycin treatment. It has an onset anywhere between one day and several months after administration. Subsequently it has also been associated with peplomycin (a bleomycin derivative), docetaxel (another chemotherapy agent), [dermatomyositis](#), adult-onset [Still's disease](#) and Shiitake mushroom dermatitis.

The exact cause of this rash is uncertain, but a number of theories have been postulated. The rash has been attributed to reduced epidermal turnover where the keratinocytes (skin cells) and melanocytes (pigment cells) are more often in contact, [postinflammatory pigmentation](#), the interruption of the normal cell cycle where the melanocytes persist in a pigment producing state or due to local bleomycin accumulation in the skin causing a subsequent [fixed drug eruption](#).

### What are the signs and symptoms?

Flagellate erythema typically presents with an itch, co-occurring with the onset of red linear streaks, which are found most commonly on the back and flanks. Over time the itch and redness resolve to leave brown pigmentation. The pattern in dermatomyositis is more inflammatory with persisting erythema.

#### Flagellate erythema



### How is the diagnosis made?

The diagnosis of flagellate erythema is usually made on observing the typical pattern of the rash, particularly when it follows administration of [chemotherapy](#). In some cases a [skin biopsy](#) is required. The [histology](#) shows hyperkeratosis, focal parakeratosis, irregular acanthosis and spongiosis within the epidermis. Dermal oedema and perivascular lymphocytes are seen, and a band of basal epidermal melanin pigment is characteristic.

### What treatments are available?

In most cases the rash resolves spontaneously. Addressing the symptom of itch is the main treatment measure.

[Systemic steroids](#) such as prednisone or dexamethasone appear to delay the onset of the rash, and may also aid in speeding its resolution. Heat in an area previously affected by flagellate erythema has caused recurrence, called heat-induced recall. Therefore cooling before chemotherapy administration may be able to prevent it. In the past a glycerine and chlorhexidine mixture has been reported as being used successfully.

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#### Related information

##### References:

- Yamamoto T, Nishioka K. Flagellate erythema. *Int J Derm* 2006; 45:627–31.
- Polla BS, Merot Y, Saurat JH, et al. Flagellate pigmentation from bleomycin. *J Am Acad Dermatol* 1986; 14:690

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If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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