

Multiple pustules with keratolysis

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Over a few weeks, a woman develops miliary pustules and keratolysis over her trunk and limbs.

What is this skin disorder and how should it be treated?

Over a three-week period, a 49-year-old woman developed progressive erythema over her trunk and limbs associated with fever and malaise. There were miliary pustules linked to areas of keratolysis that produced a crinkled, opaque, cellophane-like sheet (Figure 1). Skin biopsy from the pustular area showed collections of neutrophils below the stratum corneum, forming microabscesses (Figure 2). Bacterial cultures were negative.

Differential diagnosis

A number of skin disorders may present with superficial miliary pustules.

- **Impetigo** is associated with subcorneal pustules that may lead to keratolysis, which can be extensive in infants and immunocompromised individuals, producing an appearance like scalded skin. Impetigo is usually localised, and the pustules are often larger than those in this case and have a vesicular element that breaks down to form serous crusts. Bacterial cultures will usually grow staphylococci and, more rarely, streptococci.
- **Toxic pustuloderma** or acute generalised exanthematous pustulosis may present in an identical fashion to that seen here and is induced by a wide

range of drugs. Skin biopsy shows a subcorneal pustule with a mixture of eosinophils and neutrophils, and there is often individual keratinocyte necrosis as well as mixed superficial perivascular inflammation. This reaction is usually self-limited once the responsible medication is stopped.

- **Subcorneal pustular dermatosis** is a rare pustular eruption that can be widespread but may be localised to the flexures. In contrast to this case, the pustules are larger and they represent vesiculopustules that have a serous component and are quite transitory. Some cases of subcorneal pustular dermatosis have associated circulating intercellular keratinocyte antibodies and are now classified as variants of the blistering disease pemphigus.
- **Pustular psoriasis** is the correct diagnosis. It may be localised to the flexures or acral areas or present as annular exfoliative erythematous patches or more rarely linear lesions. The pustules may be generalised, as in this case. Pustular psoriasis may develop in individuals with classic plaque-type psoriasis but more frequently presents as repeated acute episodes. The episodes may be precipitated by streptococcal pharyngitis, by medications such as antimalarials or terbinafine, after withdrawal of corticosteroids, during pregnancy and in association with hypocalcaemia.

Treatment

Pustular psoriasis is usually treated with a systemic drug, such as cyclosporin (Cysporin, Neoral, Sandimmun), acitretin (Neotigason), methotrexate (Ledertrexate, Methoblastin) or dapsone. Drug therapy may be combined with topical measures as well as UV therapy.

Keypoint

Sterile miliary pustules and keratolysis may be seen as a distinct manifestation of acute psoriasis. MT



Figure 1. Numerous small pustules associated with erythema and keratolysis.



Figure 2. Skin biopsy showing a subcorneal collection of neutrophils forming microabscesses.

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