Erythroderma

Joelle S Dobson

Nick J Levell

Abstract

Erythroderma is a clinical syndrome producing generalized red skin. The term 'erythroderma' is not a diagnosis: it describes an acute dermatological presentation. The presentation can be acute or chronic. In acute erythroderma, there can be 'skin failure' leading to life-threatening systemic manifestations requiring supportive care on an intensive care unit. In chronic erythroderma, systemic problems are usually absent. The condition can result from inflammatory or, rarely, neoplastic processes. Common causes are psoriasis, eczema and drug eruptions. The presentation can be dramatic, and doctors must ensure they are not distracted from a diagnostic process based on careful history-taking and examination. Specific skin therapy depends on the underlying cause and the severity and time course of the condition. Close collaboration between general physicians, intensive care physicians and dermatologists is necessary for successful management.

Keywords Drug rash; eczema; erythroderma; psoriasis; suberythroderma

Common causes

Erythroderma (Table 1) is not a skin diagnosis but a clinical syndrome with many different causes. The common causes presenting to doctors in secondary care are psoriasis, atopic eczema, seborrhoeic eczema, other forms of eczema and drug eruptions. Erythroderma in the neonate may result from inherited disorders or staphylococcal scalded skin syndrome. Table 2 lists some causes of erythroderma.

Joelle S Dobson *MB BS MRCP is a Clinical Fellow in Dermatology at the Norfolk and Norwich University Hospital, UK. She is from Canada, and moved to the UK to train in medicine at St George's, University of London, UK. She is doing a postgraduate certificate in medical education through the University of Dundee, UK. She enjoys teaching medical students at the Norwich Medical School and assisting with NIHR research projects at the Norfolk and Norwich University Hospital. Research interests are palmoplantar dermatitis and cutaneous viral warts. Competing interests: none declared.*

Nick J Levell *MD FRCP MBA is a Consultant Dermatologist at the Norfolk and Norwich University Hospital, UK. He is Specialty National Lead (Dermatology) for the UK NIHR, Past-President of the British Society for Medical Dermatology and President of the British Association of Dermatologists. He has wide clinical research interests working with the UK Dermatology Clinical Trials Network to deliver studies through the NIHR. He also has research interests in epidemiology, health economics, health service delivery and history of medicine. Competing interests: as a part of the role as NIHR lead and BAD President, he engages with all major pharmaceutical companies in the UK to encourage investment, financial support of educational events and fellowship awards.*

Key points

- Take a good history, including a thorough drug history (prescribed and non-prescribed medication); diagnosis is usually based on the history
- Thoroughly examine the skin, including all mucosal surfaces
- Consider dehydration, secondary sepsis and cardiac and respiratory failure, and check core temperature
- Intensive care may be needed
- Liaise early with a dermatologist before doing a skin biopsy

Diagnosis

Diagnosis is based mainly on the history, examination and skin biopsy; other investigations are only sometimes useful.

History

How did the rash start? Was it a sudden-onset generalized rash with no preceding history – perhaps suggesting a reaction to a sudden toxic insult such as a medication, allergy or infection? Had it been present for years, fluctuating in severity – indicating chronic eczema or psoriasis? Did it start as a localized itchy rash and then disseminate – more typical of eczema? Did it start as multiple small patches that became confluent following a sore throat – pointing towards erythroderma following guttate psoriasis? Did it start gradually and insidiously spread over months to cover the body with a non-itchy rash – perhaps pointing towards cutaneous lymphoma?

Does the patient have a past history of eczema (dermatitis) or psoriasis? Many patients do not realize they have mild psoriasis. A history of scaling of the scalp, elbows and knees can be important. Others may not realize that their dry, discoloured or sensitive skin is eczema.

Have any drugs recently been started? Specifically ask about all drugs, vitamins, herbal remedies and alternative medicines. Ask about remedies taken intermittently for the bowels, cramps and analgesia. A new medicine typically causes a rash within a few days, but this can be delayed by many months or even years. Withdrawal from oral corticosteroids or initiation of lithium treatment can trigger erythrodermic psoriasis, but many other drugs have been implicated.[1]

Types of erythroderma

Erythroderma

- >90% of the skin is red

Sub-erythroderma

- 70–90% of the skin is red

Table 1

Please cite this article in press as: Dobson JS, Levell NJ, Erythroderma, Medicine (2017), http://dx.doi.org/10.1016/j.mpmed.2017.04.005

Causes of erythroderma

- Psoriasis
- Eczema (e.g. atopic, seborrhoeic)
- Drug eruptions (e.g. drug reaction with eosinophilia and systemic symptoms, acute generalized exanthematous pustulosis, toxic epidermal necrolysis)
- Pityriasis rubra pilaris
- Cutaneous lymphoma (e.g. Sézary syndrome)
- Crusted scabies
- Staphylococcal scalded skin syndrome and toxic shock syndrome
- Congenital ichthyoses (many different diseases)
- Pemphigus and bullous pemphigoid
- Netherton's syndrome and other rare genodermatoses

Table 2

Has the patient had previous allergic reactions to drugs? Ask about allergies to creams (some drugs are topical). Ask about application of cosmetics and sun creams.

Is the patient photosensitive? Ask about sun exposure and sunbeds. Consider phototoxic drug reactions, other photodermatoses and systemic causes such as systemic lupus and variegate porphyria.

General history: important systemic symptoms of skin failure include thirst, due to dehydration, and abnormal temperature perception with shivering. Ask about symptoms relating to underlying malignancy using a review of systems.[1]

Contacts: if family or friends are itching, consider scabies. Crusted (Norwegian) scabies is highly contagious.

Management of erythroderma

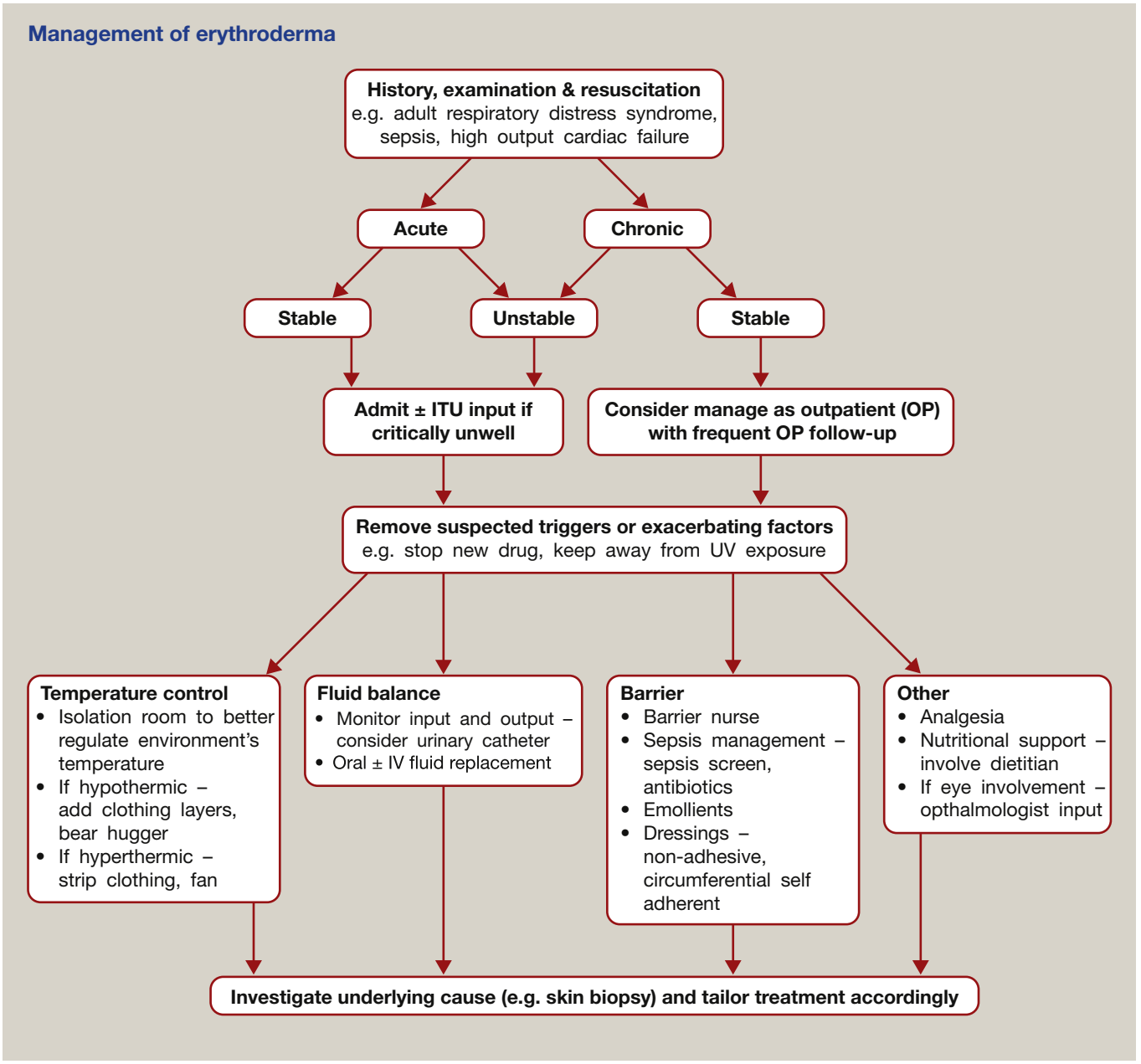

Figure 1

Please cite this article in press as: Dobson JS, Levell NJ, Erythroderma, Medicine (2017), http://dx.doi.org/10.1016/j.mpmed.2017.04.005