

Managing common skin conditions in infants

Phillips R, Beattie P. Managing common skin conditions in infants.

Practitioner June 2019;263(1827):17-20

Dr Rebecca Phillips
MB BCh
Specialist Registrar Dermatology,
Queen Elizabeth University Hospital,
Glasgow, UK

Dr Paula Beattie
BSc MB BCh BAO MD
Consultant Dermatologist,
Royal Hospital for Children,
Glasgow, UK



Practitioner
Medical Publishing Ltd

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AUTHORS Dr Rebecca Phillips

MB BCh
Specialist Registrar
Dermatology, Queen
Elizabeth University
Hospital, Glasgow, UK

Dr Paula Beattie

BSc MB BCh BAO MD
Consultant Dermatologist,
Royal Hospital for
Children, Glasgow, UK



What are the most common skin conditions?

How do they present in primary care?

Which cases should be referred?



ATOPIC ECZEMA, OR ATOPIC DERMATITIS, AFFECTS UP TO 20% OF CHILDREN AND OFTEN PRESENTS IN

infancy.¹ While the severity of the condition varies greatly, most cases are mild and can be managed in primary care. Acute eczema is characterised by dry, red and itchy skin, with or without vesicles and crusting. Later, lichenification develops.

Presentation changes with age; the face and scalp are commonly affected in infants, while children over 12 months often present with extensor involvement. In older children, eczema may become

widespread and typically affects the flexures.

Treatment focuses on controlling inflammation of the skin, while keeping the skin well moisturised and protecting the barrier function. Potential irritant or allergic triggers should be identified and avoided. The NICE guidelines outline a stepwise approach to the management of eczema depending on severity.²

MANAGEMENT OF ECZEMA

Emollients

Evidence for emollients is limited but studies have highlighted their role as steroid-sparing agent in reducing the

frequency of eczema flares.^{3,4} When choosing an emollient the parents' preference should be taken into account. Emollients should be applied liberally and frequently depending on the severity of eczema and dryness of the skin. Greasy, bland emollients are particularly useful for very dry skin and act as a barrier product. Many emollients can also be used as a soap substitute.

Topical steroids

Topical steroids have been shown to be significantly more effective in treating eczema than placebo.¹



FIGURE 1
Superficial infantile haemangioma on the eyelid



FIGURE 2
Infantile haemangioma on the trunk with superficial and deep components



FIGURE 3
Superficial infantile haemangioma on the lower limb with ulceration. Ulceration is preceded by darkening of the haemangioma, signalling skin necrosis



Ointment preparations are generally preferred and should be applied once daily. Potency and duration should be adjusted according to disease severity, site and age of the infant. For example, an infant with mild to moderate eczema may be prescribed a mild potency topical steroid once daily for the face until clear (7 days) and a moderate potency steroid once daily on the body (7-14 days).

Treatment can be stepped up as needed, but potent topical steroids should be avoided on the face and delicate areas such as the groin.

In chronic and relapsing cases, maintenance 'weekend' treatment can be continued where topical steroids are applied on two consecutive days of the week to previously active areas. This has been shown to reduce the frequency of flares.^{5,6}

Topical tacrolimus

Topical tacrolimus is of similar efficacy to mild and moderate potency topical steroids in treating eczema.⁷ NICE recommends topical tacrolimus as second-line treatment in moderate and severe eczema.² Tacrolimus 0.03% is licensed for children from the age of two years but can still be a useful addition as a steroid-sparing agent in infants needing repeated topical steroids, particularly on the face. Topical tacrolimus is usually initiated in secondary care or by GPs with a special interest in dermatology. A treatment regimen might start with once or twice daily application for six weeks followed by twice weekly maintenance.

INFECTED ECZEMA

Infants with eczema are more prone to viral and bacterial infections.

Staphylococcus aureus is the most commonly implicated organism, found on the skin of 80% of people with eczema, even in the absence of clinical infection. Treatment with topical steroids alone will reduce staphylococcus by restoring the skin barrier.

Topical antibiotics should be reserved for patients with signs of severe infection, including crusting and weeping and oral antibiotics for severe, widespread involvement. Both topical and oral antibiotics should be used for short periods and in conjunction with topical steroids.

If herpes virus infection is suspected, the infant should be commenced on oral aciclovir and referred to secondary care if the infection is widespread and eczema herpeticum suspected.

key points

SELECTED BY

Dr Matthew Lockyer
GP, Suffolk, UK

Atopic eczema, or atopic dermatitis, affects up to 20% of children and often presents in infancy. Presentation changes with age; the face and scalp are commonly affected in infants, while children over 12 months often present with extensor involvement. In older children, eczema may become widespread and typically affects the flexures.

Evidence for emollients is limited but studies have highlighted their role as a steroid-sparing agent in reducing the frequency of eczema flares. They should be applied liberally and frequently depending on the severity of eczema and dryness of the skin. Topical steroids have been shown to be significantly more effective in treating eczema than placebo. Ointment preparations are generally preferred and should be applied once daily.

Infants with eczema are more prone to viral and bacterial infections. *Staphylococcus aureus* is the most commonly implicated organism; treatment with topical steroids alone will reduce staphylococcus by restoring the skin barrier. Topical antibiotics should be reserved for patients with signs of severe infection, including crusting and weeping and oral antibiotics for severe, widespread involvement. They should be used for short periods and in conjunction with topical steroids. If herpes virus infection is suspected, the infant should be commenced on oral aciclovir and referred to secondary care if the infection is widespread and eczema herpeticum suspected.

Cow's milk allergy can also manifest as eczema and gastrointestinal (GI) symptoms. Food allergy should be suspected if there is a clear history of a reaction to a food in infants with moderate to severe eczema not responding to standard treatment, in infants with very early onset eczema (under 3 months) and those with GI symptoms.

Seborrhoeic dermatitis or cradle cap is often an early manifestation of atopic eczema. Shampoo, like soap, acts as an irritant and can exacerbate underlying inflammation. Olive oil may also irritate the skin after repeated application. Removal of scale without treating underlying inflammation results in rapid recurrence of scale. However, applying a topical steroid after softening scale with ointments and removing with gentle combing will help to reduce scaling.

Infantile haemangiomas, previously known as strawberry naevi, are common, benign vascular tumours with a prevalence of 4.5%. Most infantile haemangiomas require no treatment and parents should be reassured that they will gradually regress over the years. Patients should be referred to secondary care if: a haemangioma is particularly large; there are five or more present; ulceration develops; a segmental haemangioma is suspected; if there is severe anatomical distortion or functional risk, such as breathing, feeding, or visual disturbance. Topical timolol (0.5% gel-forming solution) can also be helpful for smaller superficial haemangiomas.

ALLERGY

Sensitisation to airborne allergens and food allergens is present in up to 80% of children with eczema but does not imply clinical allergy in the absence of a history of reaction.⁸ While reactions to most allergens are acute type I reactions, cow's milk allergy can also manifest as eczema and gastrointestinal (GI) symptoms.

Food allergy should be suspected if there is a clear history of a reaction to a food in infants with moderate to severe eczema not responding to standard treatment, in infants with very early onset eczema (under 3 months) and those with GI symptoms. A trial of a milk-free diet or hypoallergenic formula should always be accompanied by treatment of the eczema, as above.

SEBORRHOEIC DERMATITIS

Seborrhoeic dermatitis or cradle cap is often an early manifestation of atopic eczema. Shampoo, like soap, acts as an irritant and can exacerbate underlying inflammation. Olive oil may also irritate the skin after repeated application.

Removal of scale without treating underlying inflammation results in rapid recurrence of scale. However, applying a topical steroid after softening scale with ointments and removing with gentle combing will help to reduce scaling.

INFANTILE HAEMANGIOMAS

Infantile haemangiomas, previously known as strawberry naevi, are common, benign vascular tumours with a prevalence of 4.5%.⁹ They usually develop in the first few weeks of life, although deeper components may not become apparent until later. They are commonly seen on the head and neck. Superficial infantile haemangiomas appear as bright red, well demarcated, elevated lesions on the surface of the skin, see figure 1, opposite, while deep haemangiomas are characteristically bluish soft to firm swellings lying deeper in the dermis and subcutis. Many have both deep and superficial elements, see figure 2, opposite.

Infantile haemangiomas follow a characteristic growth pattern with rapid growth in the early stages up to 3 months, most noticeable between 5 and 8 weeks. This is followed by a period of relative stabilisation and then gradual resolution over months to years. Most regression is complete by school age, although deep components may take longer. Large segmental haemangiomas can be associated with underlying structural abnormalities.

Most infantile haemangiomas require no treatment and parents should be reassured that they will gradually regress over the years. »

FIGURE 4

Capillary vascular malformation: port wine stain



Large or bulky tumours may leave scarring, telangiectasia and skin laxity which may be managed by plastic surgery later if indicated.

Complications develop in a small proportion of infants. Patients should be referred to secondary care if:

- A haemangioma is particularly large
- There are five or more present
- Ulceration develops, see figure 3, p18
- A segmental haemangioma is suspected
- If there is severe anatomical distortion or functional risk, such as breathing, feeding, or visual disturbance

Infants are best assessed and treated early in the rapid growth phase. Propranolol is now first-line treatment for high-risk infantile haemangiomas and large studies have demonstrated good response rates.¹⁰ Topical timolol (0.5% gel-forming solution) can also be helpful for smaller superficial haemangiomas.

CAPILLARY VASCULAR MALFORMATIONS

Naevus simplex

A naevus simplex is a common congenital capillary malformation, also referred to as a salmon patch,

occurring in up to 40% of newborns.¹¹ Typically, they appear as a pink or red macular mark with poorly defined borders. They commonly occur at the nape of the neck ('stork bite') where they persist to adulthood and forehead ('angel's kiss') where they fade, with most having resolved by 12 months.

Port wine stains

Port wine stains (naevus flammeus), see figure 4, p19, are less common, occurring in about 0.3% of infants.¹² They present at birth as a macular, sharply demarcated red to purplish patch on the skin. The lesions can occur anywhere on the skin and are usually unilateral, sometimes with a sharp midline cut-off. They can darken over time and on the face they can also thicken.

Involvement of the forehead and scalp can be associated with underlying neurological features (Sturge-Weber syndrome). Treatment options include camouflage and laser therapy.¹³

TRANSIENT NEONATAL CEPHALIC PUSTULOSIS

This condition is a variant of neonatal acne caused by malassezia yeast colonisation of the skin.¹⁴ It is characterised by small clustered pustular lesions on the face and scalp on a background of mild erythema in newborns, typically presenting in the third week, see figure 5, left.

The infant is usually systemically well and the diagnosis clinical. The condition resolves spontaneously but a topical antifungal or an antifungal in combination with a mild topical steroid may help, for example miconazole and hydrocortisone cream, or ketoconazole.

Competing interests: None

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FIGURE 5

Transient neonatal cephalic pustulosis in a 2-week-old infant



Useful information

British Association of Dermatologists Patient information leaflets

www.bad.org.uk/for-the-public/patient-information-leaflets

NICE Clinical knowledge summaries Atopic eczema

<https://cks.nice.org.uk/eczema-atopic>

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