

Topical Corticosteroids – What are the risks?

Note – this is a detailed fact sheet prepared for general practitioners

Topical corticosteroids (CS) are extremely effective, beneficial preparations in the management of infantile and childhood atopic dermatitis. Unfortunately, “corticophobia” abounds, with fears about potential adverse effects greatly exceeding reality. If these fears are not specifically addressed, many parents will simply not have the confidence to use them.

The potential adverse effects of topical CS, and their relative risks, can be summarised as follows.

Systemic Adverse Effects

1. HPA axis suppression

Several follow up studies have now been published which show HPA axis suppression to be a very uncommon problem with long term intermittent use of moderately potent preparations. It becomes a more real concern with overuse of potent preparations or children with both atopic dermatitis and asthma, who are also on maximal doses of inhaled steroids.

2. Growth

Severe atopic dermatitis commonly causes constitutional growth delay. Studies using a knemometer have shown effective treatment with moderate- potent topical CS actually helps children fulfil their growth potential.

Local Adverse Effects

1. Thinning of the skin (atrophy)

This is the most widely known and feared complication. It is rarely seen with low or mid potency preparations, including the newer agents methylprednisolone and mometasone. It can occur when potent fluorinated agents such as betamethasone dipropionate 0.05% are used in the axillae, groin or inner thighs for prolonged periods and usually presents as stretch marks. It is a most unlikely complication when thickened, lichenified areas of skin are being treated.

2. Hypopigmentation

Many atopic children with olive complexions develop hypopigmented areas where they have had eczematous inflammation. This post inflammatory hypopigmentation is commonly mistaken for being steroid induced. True topical steroid induced hypopigmentation is rare and usually only occurs in the setting of atrophy.

3. Increased hair

This can occur, but is more likely to be due to chronic scratching.

4. Perioral dermatitis

This is a definite potential complication of fluorinated topical CS and mometasone used on the face. It is not to be feared as is very treatable with oral erythromycin in children or doxycycline in teenagers or adults.

5. Folliculitis

Greasy topical steroids can be occlusive, particularly in hot, humid weather. However, most folliculitis developing with topical steroid use is due to staphylococcal colonisation.

6. Telangiectasia

This is most commonly seen on the face and neck of patients with severe, long standing atopic dermatitis. It is a relatively minor problem for the benefit that has often been derived and can be treated with laser if necessary.

7. Tachyphylaxis

This is a very real problem with long term use. For this reason, children with severe or frequently recurring inflammation are better treated with a moderate or potent preparation twice weekly, than daily use of a mild CS.

8. Allergy

It is possible to develop a type 4 hypersensitivity reaction to one or more topical CS. If this is suspected, it can be confirmed by patch testing to the CS series.

Principles of Use

The following suggestions for using topical CS in the management of atopic dermatitis apply to all ages.

- use ointments rather than creams as they are more moisturizing, more effective and cause less stinging.
- once daily treatment is as effective as twice or three times daily dosing and encourages compliance.
- treat aggressively and aim for perfection. Once clear, cease CS and moisturise.
- rapidly abort flares, don't wait until the inflammation is severe.
- treat all areas, not just the worst.
- for chronic patients, aim for twice weekly maintenance therapy to reduce tachyphylaxis.
- for patients responding poorly, the addition of wet wraps improves response.
- limit plastic occlusion to small areas such as fingers and ankles, as it significantly increases penetration and the risk of atrophy.
- don't give a time limit but review after two to three weeks to check response.
- prescribe a reasonable quantity. One 15g tube for a child with widespread dermatitis is simply impractical and encourages under use.
- prepare patients for the warnings that will inevitably be issued by dispensing pharmacists. Every time the word sparingly is used it reinforces fears about adverse effects.

To conclude, topical corticosteroids are a very valuable treatment for atopic dermatitis and are very safe when used sensibly. Adverse effects must be put into perspective for parents as fears surrounding their use are greatly sensationalised in the community. If these fears are not addressed, compliance with prescribed treatments will be poor.