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CHANGE PAGE

Established corticosteroid creams should be applied only once daily in patients with atopic eczema

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Change Page aims to alert clinicians to the immediate need for a change in practice to make it consistent with current evidence. The change must be implementable and must offer therapeutic or diagnostic advantage for a reasonably common clinical problem. Compelling and robust evidence must underpin the proposal for change.
Series editor: Joe Collier (changepage@bmj.com), professor of medicines policy, St George's Hospital and Medical School, London.
Anyone wishing to propose a change in clinical practice should discuss the proposal with Joe Collier at an early stage

The clinical problem

Atopic eczema affects many adults and up to 20% of children,[1] with health costs comparable to diabetes[2] and asthma.[3] One community survey of 1760 young children in the United Kingdom found that 84% had mild eczema, 14% moderate, and 2% severe eczema.[4] Topical corticosteroids are a mainstay of treatment for inflammatory episodes.[5] Most long established topical corticosteroids such as betamethasone valerate or hydrocortisone are applied at least twice daily, but three newer preparations (mometasone, fluticasone, and methylprednisolone) have been developed for once daily application. Here, I propose that established preparations need be applied only once daily.

The evidence for change

Ten randomised controlled trials compared once daily versus more frequent application of topical corticosteroids within the same potency group. The findings are summarised in a UK Health Technology Assessment report and guidance from the National Institute for Health and Clinical Excellence (NICE).[6 7] Another short term study has been published more recently.[8] None of the studies found clear evidence that applying topical corticosteroids more than once a day produced better overall clinical outcomes in eczema, such as the number of people with a good response. Clear evidence of a faster response with more frequent use or a better response in subgroups such as children was lacking. No data were given on relapse rates.

The main adverse effect of topical corticosteroids is thinning of the skin.[9] The studies included in the technology assessment were too short in duration (three to four weeks) to see if once daily application results in less skin thinning. However, as skin thinning is related to the amount and duration of topical corticosteroid, its strength, and its site of application,[10] reducing the frequency of application could reduce local adverse effects.

It seems logical that applying topical corticosteroids once daily instead of twice daily would reduce costs by up to 50%. However, three newer potent topical corticosteroid preparations have been specifically manufactured and tested for once daily use (mometasone furoate, fluticasone propionate, and methylprednisolone aceponate[7 11]). Newer once daily preparations may still cost more than twice daily use of older preparations such as betamethasone valerate. No trial has directly compared once daily betamethasone with once daily newer preparations. A blanket recommendation for a switch to once daily application of topical corticosteroids could paradoxically increase costs.[6] This dilemma led to a mixed recommendation in the original NICE guidance to use topical corticosteroids once or twice daily and to use the cheapest alternative.[7] Later papers have been more forthright in supporting once daily application of established corticosteroids.[12 13]

KEY POINTS

- Established topical corticosteroids such as betamethasone valerate have typically been used twice daily or more frequently for treating inflammatory episodes of eczema
- Reducing the frequency of application to once daily does not seem to result in loss of efficacy and could lead to fewer local side effects
- Using topical corticosteroids just once a day may be more convenient for patients and may save costs if established preparations are used

The barriers to change

The case for changing to once daily application of established corticosteroids is strong. It is based on lack of evidence of superior efficacy in 11 randomised controlled trials; cost savings of up to 50% to the state or patient if an established preparation such as betamethasone valerate 0.1% is considered; the convenience to patients of applying preparations just once daily (important as a recent study suggested that mean adherence to twice daily topical corticosteroids was only 23%[14]); and the possibility that side effects such as skin thinning ca n be reduced. Conflicting written advice in package inserts can be overcome by counselling patients beforehand. A change to once daily topical corticosteroids was suggested 10 years ago.[15] Perhaps the biggest barrier to change is habit.

How should we change our practice?

Patients using moderate, potent, or very potent topical corticosteroids more than once a day should switch to once daily use. However, the above evidence on short term use of mostly potent topical corticosteroids in people in secondary care may not be generalisable to those with very mild eczema using mild preparations, such as 1% hydrocortisone, for longer periods.

Competing interests: None declared.

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