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Aerosol steroids for the treatment of peristomal mucocutaneous breakdown due to severe eczema



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ABSTRACT

INTRODUCTION: We describe a novel treatment of mucocutaneous peristomal junction breakdown in a patient with severe eczema using aerosol steroids, where conventional methods failed to achieve healing.

PRESENTATION OF CASE: Observation and photographic evidence showing resolution of severe peristomal eczema in a patient, in whom systemic steroids were contraindicated, using a topical aerosol steroid. We found complete resolution of peristomal eczema and symptoms within four weeks.

DISCUSSION: Topical aerosol steroids are better tolerated than alcohol based steroid preparations, achieve improved stoma appliance adherence in comparison to oil based steroid preparations and reduce systemic side effects in comparison to systemic oral steroids.

CONCLUSION: Aerosol steroids appear to be a safe and effective way to treat refractory peristomal eczema and may be of use in other peristomal inflammatory conditions including contact dermatitis.

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1. Introduction

Almost 100,000 people in the UK have a surgically made stoma.¹ Peristomal skin integrity is vital for a stoma appliance adherence. Mucocutaneous breakdown affects the base plate's ability to attach properly to the skin and may result in leakage. This can be debilitating for patients and result in social isolation.²

Little has been published on the prevalence, prevention or management of stoma skin problems and even less on specific pre-existing dermatological diseases and stomas. Peristomal skin problems are thought to be common with some studies reporting frequencies of up to 60%.³ In a postal questionnaire study by Lyon et al.¹ psoriasis, seborrhoeic dermatitis and eczema together accounted for 20% of the peristomal skin problems encountered.

The mainstay of treatment for patients with eczema affecting peristomal skin is topical steroids such as betamethasone valerate (0.1%) aqueous lotion applied to peristomal skin with each bag change for two weeks.^{1,4–7} Systemic steroid therapy may be indicated if disease is widespread or not responding to topical steroids.

Topical therapy can be suboptimal and some patients may have contraindications to systemic therapy. We describe and present a novel technique in a patient whose severe peristomal eczema responded to aerosol steroids after other treatments had failed.

2. Presentation of case

A 52-year-old man was presented with an obstructing non-metastatic anal squamous cell carcinoma and required a trephine defunctioning loop colostomy positioned in the left iliac fossa. Following fashioning of his colostomy he developed a generalised exacerbation of eczema with widespread erythematous skin and multiple excoriations consistent with infected eczema. This resulted in breakdown of the mucocutaneous junction of the stoma due to eczema. There was no leakage of the appliance to suggest contact dermatitis at this stage, confirmed after Dermatology advice was sought. Systemic steroids were absolutely contraindicated due to an unrelated episode of septic arthritis of the elbow joint during the admission, requiring surgical drainage and parenteral antibiotics.

Despite response of the systemic eczema to appropriate medical therapy (including antibiotics and topical steroid ointment), the peristomal eczema deteriorated in our patient. (Fig. 1) The mainstay of treatment at this time was topical steroids. The oil based steroid ointment, however, resulted in poor stoma appliance adherence with multiple stoma bag leakages, thus driving the cycle of further skin irritation.

Other corticosteroid preparations, including a water miscible scalp lotion (betnovate valerate 0.1%) were trialled. It is thought that water miscible scalp lotions do not impair adhesion of the stoma pouch to clean dry skin. Unfortunately these preparations were poorly tolerated, as the alcohol content resulted in severe discomfort when applied to broken skin.

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Fig. 1. Mucocutaneous peristomal breakdown due to eczema after conventional topical steroid treatment.

With failure of conventional management of mucocutaneous stoma breakdown in our patient with infected eczema, a trial of beclometasone dipropionate aerosol inhaler was introduced and significant improvement was seen within a week (Fig. 2). Two puffs of the aerosol were applied topically to the peristomal area at each stoma bag change. Bag leakage and irritation were reduced, patient satisfaction and pain improved and application of the inhaler was felt to be more convenient than other methods trialed. Four weeks after commencing topical aerosol steroids, complete healing of the peristomal ulceration was seen. At eight month follow up this good response was sustained without the need for any further steroid use (Fig. 3).

3. Discussion

In comparison to other methods of treating peristomal eczema (Table 1), aerosol steroids are a quick, easy to apply method that reduces both the systemic side effects of oral steroids and the problems of stoma bag leakage seen with oil based preparations. The aerosol steroid is well tolerated in patients with broken peristomal skin unlike an alcohol based preparation.

To date there has only been one case report in the literature from Boland and Brooks⁸ in 2012 describing the use of aerosol steroids to treat peristomal inflammation secondary to contact dermatitis in contrast to peristomal eczema.



Fig. 2. Peristomal area of colostomy one week after commencing topical beclometasone dipropionate aerosol treatment.



Fig. 3. Long-term follow-up of colostomy at eight months showing complete resolution.

The advantages and disadvantages of different types of steroids used to treat peristomal eczema are listed in Table 1.

There are few complications of aerosol steroids in the doses used, however, the same complications should be expected of prolonged exposure to any steroid. Thus refractory treatment greater than four weeks should prompt the clinician to rethink the diagnosis.

Oral corticosteroids are rapidly absorbed by the gastrointestinal tract and subject to first pass metabolism in the liver in contrast to topical and aerosol steroids which are absorbed directly into the systemic circulation via the skin. All preparations are excreted in urine via the kidneys as sulphate and glucuronide conjugates.

Table 1
Advantages and disadvantages of different types of steroids used to treat peristomal eczema.

	Advantages	Disadvantages
Oil based topical steroids (e.g. clobetasol propionate)	<ul style="list-style-type: none"> • Reduced systemic side effects • Good compliance with broken skin 	<ul style="list-style-type: none"> • Poor bag adherence • Lotion needs to dry before applying bag
Water based topical steroids (e.g. betamethasone valerate)	<ul style="list-style-type: none"> • Reduced systemic side effects • Acceptable bag adherence 	<ul style="list-style-type: none"> • Irritation on repeated application • Discomfort due to alcohol content • Lotion needs to dry before applying bag
Aerosol steroids (e.g. beclometasone dipropionate)	<ul style="list-style-type: none"> • Reduced systemic side effects • Good bag adherence • Good compliance with broken skin • ‘Cooling’ effect on skin • Quick dry, no waiting before applying bag 	<ul style="list-style-type: none"> • ‘Off licence’ • ‘Off licence’
Systemic steroids (e.g. prednisolone)	<ul style="list-style-type: none"> • Treats systemic eczema • No local irritation • No bag adherence issues 	<ul style="list-style-type: none"> • Risk of systemic side effects • Relative contraindication in sepsis • Reduced efficacy for local symptoms

Topical and aerosol steroids are associated with lower toxicity than systemic steroids.⁹

4. Conclusion

In conclusion aerosol steroids can successfully treat peristomal skin breakdown and ulceration in a patient due to severe eczema.

Conflict of interest

We declare no conflicts of interest.

Funding

Nothing to declare.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contributions

Nicholson – study conception and design, analysis and interpretation of data, writing manuscript; Sriskandarajah – acquisition of

data'; Moore – acquisition of data; Clouston – acquisition of data; Telford – study conception and design.

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