Betesil® Medicated Plaster. A case study

Polly Buchanan

This article represents a case study involving a 57-year-old female who has lived with psoriasis and eczema for more than 30 years. As a community dermatology nurse specialist, I met this lady in March 2024, when she was referred to my clinic with unresolving eczematous psoriasis.

Using a bio-psychosocial assessment and a problem-solving approach, together we were successful in being to be able to achieve self management of her skin condition. Key to this success was discussing treatment options and agreeing a management plan which suited her lifestyle. This was achieved by encouraging complete emollient therapy daily[1] and the daily application of a steroid impregnated medical plaster (Betesil®).[2,3,4]

Past medical history

Mary (nom de plume) reported no serious medical conditions or operations, although in latter years she has developed asthma. Her BMI is 29. She is a non-smoker and drinks alcohol occasionally (three units per week). She has a history of anxiety and depression during early adult life, although no current symptoms.

Known allergies: erythromycin, penicillin.

Current medications include Salbutamol 100mcg/dose inhaler one-two puffs up to four times daily, Luforbec inhaler 100mcg+ 6mcg/dose, two puffs twice daily.

Skin history

Mary has lived with eczematous psoriasis for more than 30 years. She was first diagnosed during adult life and presented with both a combination of small and large scaley plaque lesions. She reported stress as a major trigger.

Betesil external packaging: 8 pack and 4 pack

> "Betesil® Medicated Plaster provides a metered release of betamethasone valerate 2.250mg, which does not over-treat or undertreat the lesions"

She suffers frequent flares which causes her some distress due to the appearance of her skin and intense itch. The latest flare of her eczematous psoriasis started in 2022, and since this flare Mary has not had a period of clear skin. On the most recent occasion, these eczematous plaques have affected her face, trunk and limbs.

Family history

There is a strong familial history of psoriasis, with her father also affected. There is also a strong familial history of myocardial infarctions and diabetes mellitus.

Summary:
This article presents a short case study looking at the experiences of a 57-year-old female with unresolving eczematous psoriasis. Betesil® Medicated Plaster was used to treat the patient, who was satisfied with the results.

Author info:
Polly Buchanan is a Community Nurse Dermatology Specialist and Clinical Editor of *Dermatological Nursing*.

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Previous skin treatments

To date, Mary has used a range of topical medications including various emollients such as Hydromol ointment, QV Gentle Wash and Aveeno cream. In combination with emollients, Mary has tried a range of topical corticosteroids over the last two years, varying in potencies and formulations. She has tried hydrocortisone 1% cream, betamethasone valerate cream 0.025%, Daktacort cream, Dovobet ointment, Exorex hair and body shampoo, Pimecrolimus cream, and Duoderm extra thin dressings on larger plaques. Despite these various topical treatments being used she has had little resolution over the two-year duration.

In early March 2024, Mary suffered an acute exacerbation of her asthma, presenting with shortness of breath on exertion. She was treated with oral prednisolone 40mg for five days. This resulted in most of her breathlessness and eczematous psoriasis resolving, apart from two recalcitrant plaques; one on the right wrist/forearm region and the other on her right lower leg lateral ankle. On examination, the plaques were erythematous, scaley and indurated. Mary reported that these two plaques had never resolved completely since 2015 (seven years), despite tirelessly using regular emollients and topical therapies.

> "Mary reported that the Betesil® plaster was the best treatment she had ever used"

SWIFT check-up tool

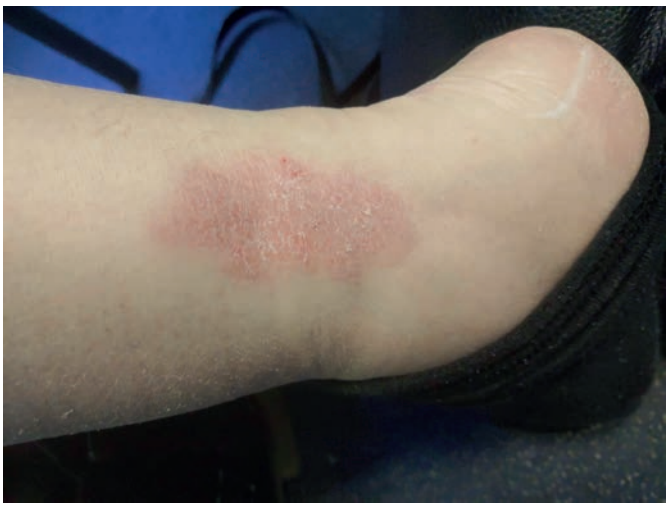
Using the SWIFT (Social, Work, Illness, Family and Things I like to do) check up tool,[5] Mary reported that she is a carer for her parents, is married and has one adult daughter. She reports life as hectic, always on the move, and in and out every day all day due to work and caring responsibilities. She admits to becoming increasingly frustrated with her skin condition, finding it very tiresome living every day with a constant itchy and unsightly skin lesion. However, during the assessment Mary did not demonstrate any concerning signs or symptoms of anxiety of depression.

Agreed plan

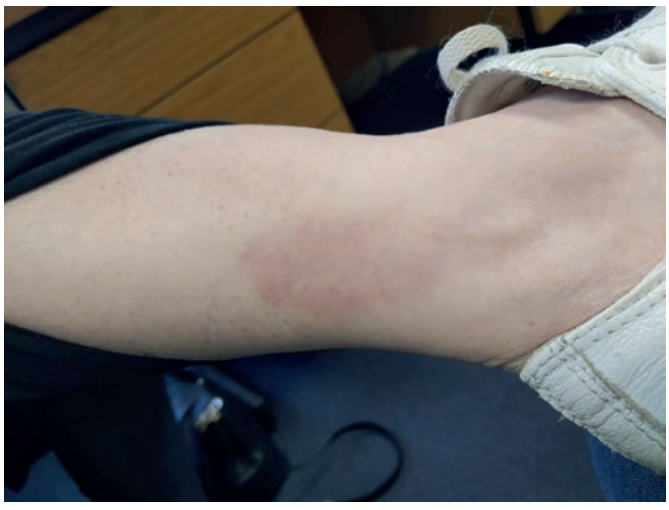
As Mary had recently been treated with oral prednisolone, I was concerned that sudden discontinuation of steroids may trigger a 'rebound effect', resulting in the eczematous psoriasis flaring again. We discussed complete emollient therapy daily and initiating a reducing regimen of topical corticosteroid, treating only the plaques and areas prone to flare. As mentioned previously, Mary had already tried a concoction of different emollients and topical corticosteroids over the past two years. During this period, only one occasion was noted of trialling a potent topical corticosteroid/vitamin D fixed-dose, combination ointment, with Mary reporting its inefficacy.

Building on my clinical experience, and having had success with steroid impregnated plasters in the past (used for psoriasis, discoid eczema, lichen planus, lichen simplex and granuloma annulare), I suggested Mary try Betesil® potent steroid plaster (betamthasone valerate 2.250mg), applied once daily for 12 hours, then removed for 12 hours, gradually reducing frequency of application and potency of topical corticosteroid as the lesions resolve. I initially prescribed two eight packs of Betesil® plasters to provide a 12-hour application on two sites over a four-week period. I provided an individualised written reducing regimen care plan for Mary to follow at home.

One of the advantages of a Betesil® medicated plaster is that it is a regulated metered release of betamethasone valerate 2.250mg, which ensures that the plaster's occlusiveness does not over-treat or undertreat the lesions.



Before treatment



After treatment

I advised Mary to trim the plaster to the shape and size of each lesion, using a fresh plaster each day for one week. Then, gradually reduce the frequency of application as the lesion resolves. She was also advised to continue daily use of soap substitutes and emollients.

Follow-up

One month after treatment initiation, Mary attended a review appointment. On examination, the two resistant plaques of psoriasis had completely resolved. The psoriasis plaques were barely visible, with only residual hyperpigmentation remaining. The lesions were also non-palpable.

At this stage, I was confident that Mary could wean off the Betesil® plaster completely and continue with emollients as a stand-alone therapy.

Mary reported that 'the Betesil® plaster was the best treatment she had ever used for the two resistant plaques of psoriasis'. She reported ease of application, good adherence to skin, minimal movement of the plaster during the 12-hour periods of treatment and pain-free removal. Overall, she was very pleased with the clinical outcome, and seeing her skin clear for the first time made her very feel 'normal'. She clarified that she was happy to continue to self-care at home with emollients and repeat topical applications as per the care plan should her eczematous psoriasis flare again.

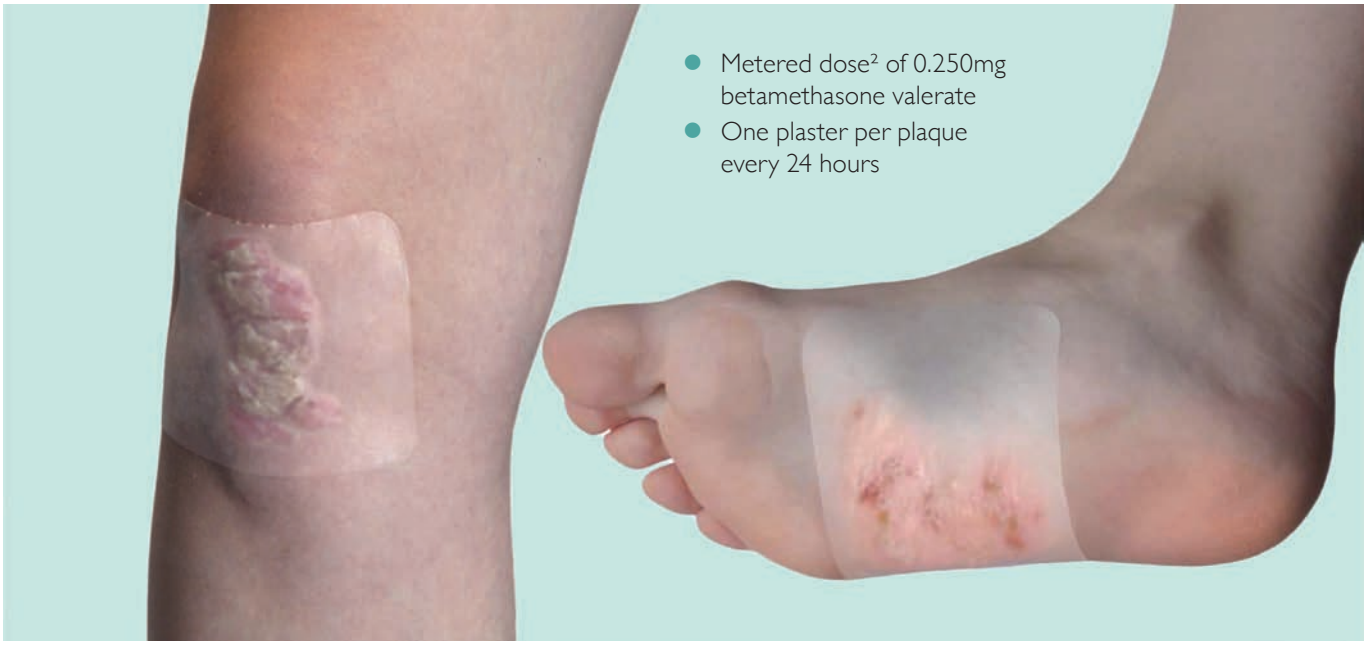
Long-term follow-up

As Mary has a strong family history of cardiovascular disease, diabetes and psoriasis, I advised Mary to attend my clinic once a year for psoriasis co-morbidity screening[6] which includes BP, BMI, Bloods (FBC U&Es, LFTs, Cholesterol/HDL, Triglycerides, glucose, CRP). During this annual review Mary also completes a Dermatology Quality Life Index (DLQI), Patient Health Questionnaire 9 (PHQ-9) and General Anxiety Disorder questionnaire (GAD-7) to monitor the impact of her skin condition on both her psychosocial wellbeing and life quality. In the meantime, she was happy to self care for her skin at home.

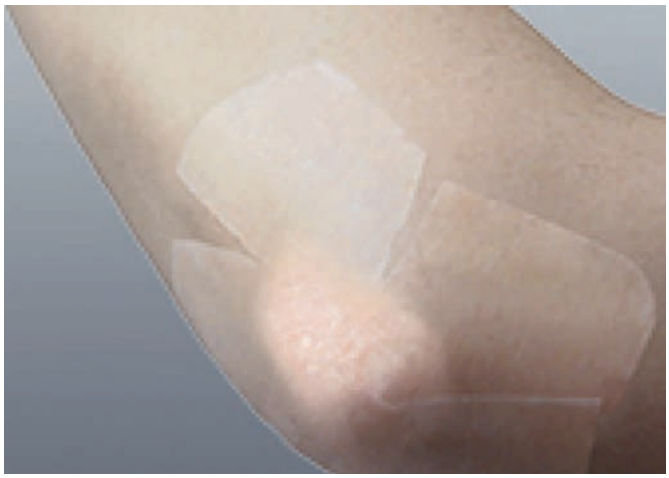
Key learning points

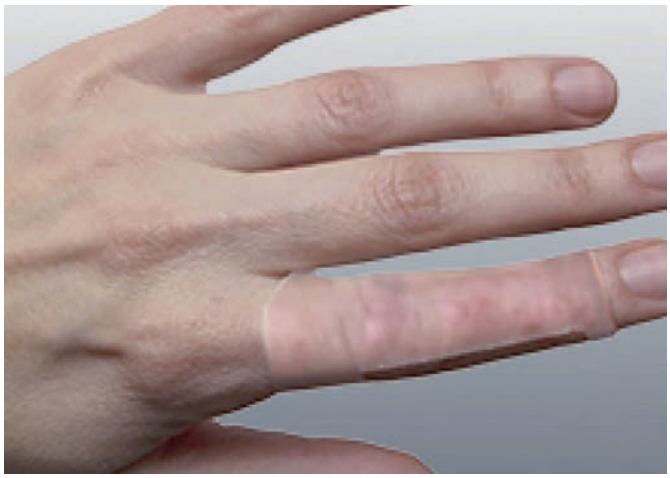
1. Bio-psycho-social assessment is key to success. Using these assessment tools enables healthcare professionals to determine duration of disease, presentation of the disease, treatments to date and offers timely interventions with treatments that meet the patients' individual needs. Further consideration should be given to how the patient is coping with the skin condition and how the condition is making the patient feel.
2. Due to the latest eczematous psoriasis flare lasting two years, I considered 'steroid phobia'. On reviewing Mary's topical medicines prescribed previously, I noted that all but one topical corticosteroid was prescribed with potencies from either mild or moderate in strength. I also recalled from my conversations with Mary that she did not express any reluctance in applying topical corticosteroids (TCS) to her skin, just frustration that treatment wasn't working. I concluded that she did not have a steroid phobia. However, the prescribing health professionals may have been reluctant to prescribe a more potent TCS, which resulted in the repeated prescriptions of mild to moderate TCS over a prolonged period, despite little or no clinical effect.
3. The use of a treatment protocol using a potent TCS impregnated plaster can safely and effectively target specific areas with rapid clinical resolution over a four-week period. This is in preference to using a less effective lower potency topical corticosteroid over many months.
4. Follow up and co-morbidity screening is important for all persons living with psoriasis so that any co-morbidities can be diagnosed and treated in a timely fashion.

> "She reported ease of application, good adherence to skin, minimal movement of the plaster during the 12-hour periods of treatment and pain-free removal"



Illustrative Images





Pros of Betesil® Medicated Plaster versus topical creams

	Betesil®	Steroid cream
Metered dose² of 2.250mg betamthasone valerate	√	X
Helps manage risk of inaccurate dose by patient	√	X
Targeted application	√	X
Won't rub off, spread or transfer to clothes/bedding	√	X

How to prescribe Betesil® Medicated Plaster

How often?	One plaster per plaque every 24 hours
How many?	Six plasters per day maximum
What's in the pack?	10cm x 7.5cm plasters Individually foil packed (box of four or eight plasters)
Is it secure?	Adhesive strips supplied to secure dressing if needed
Maximum length of treatment?	30 days until plaque improves then, if needed, continue topical treatment with a less potent corticosteroid

> "One month after treatment initiation, the two resistant plaques of psoriasis had completely resolved"

How does this case study relate to the NMC professional code of conduct?

As part of my continuing professional development and reflective practice, this case study report relates to the following parts of the NMC Code of professional practice: *Person Centred Care, Safe and Effective Care/Intervention as well as Evidence Based Practice.*[7]

Part of my clinical role and NMC Code involves professional development. This case study made me aware of the need for ongoing professional development of my colleagues and providing them with knowledge of management strategies and new treatment formulations.
In this case, the awareness of new formulations, prescribing TCS, reducing regimen for TCS, written care plans and the importance of a bio-psycho-social assessment at every follow-up review.

Key product features

- Most potent topical steroid plaster of its kind[8]
- Single use, or multiple use by cutting to size or smaller size
- One month's use after opening each plaster sachet
- Aluminium storage pouches ensure plaster integrity once opened/cut
- Supplied with adhesive strips to secure dressing if required
- Comparative cost-effective treatment per cm²
- Available in packs of four and eight

- One month's use after opening each plaster sachet.
- Aluminium storage pouches ensure plaster integrity once opened/cut.

Cost effectiveness/optimisation

Betesil® four pack: 7.5cm x 10cm = 300cm². Price per cm² = 5 pence.
NHS Price: £13.98.
Betesil® eight pack: 7.5cm x 10cm = 600cm². Price per cm² = 5 pence.
NHS Price: £27.46.

For further details see Betesil® 2.250mg medicated plaster Summary of Product Characteristics (SmPC). For prescribing information visit: **Betesil.co.uk**

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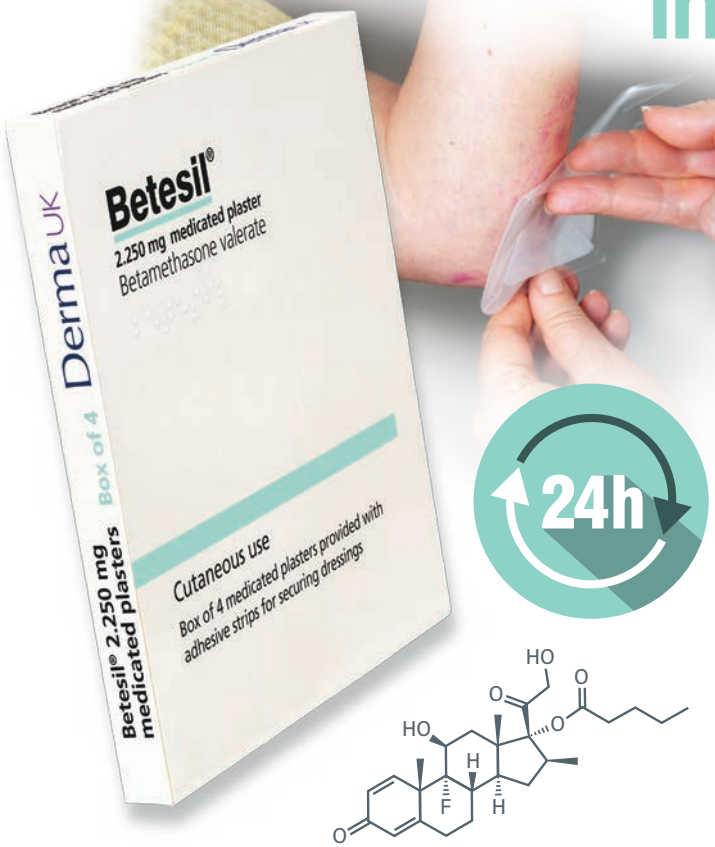
Declaration of interest

This product focused article is sponsored by Derma UK. The author has previously worked as consultant and author to several different pharmaceutical sponsored educational articles for *Dermatological Nursing* and other nursing journals.

Betesil®

2.250 mg medicated plaster
Betamethasone valerate

Most potent topical steroid plaster of its kind to treat inflammatory skin conditions (1)



Uniform metered dose of Betamethasone Valerate

- Single use, or multi-use by cutting to any shape or smaller size
- Up to one month's use after opening each plaster sachet (2)
- Aluminium storage pouches ensure product integrity once open/cut (2)
- Supplied with adhesive strips to secure dressing if required
- Comparatively cost effective treatment per sq.cm (3)

Watch 'how to use' video at dermauk.co.uk

E: info@dermauk.co.uk W: dermauk.co.uk T: 0191 375 9020

Another trusted product from
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Derma UK

Abbreviated Prescribing Information for BETESIL® 2.250 mg medicated plaster. Please refer to the full Summary of Product Characteristics (SmPC) prior to prescribing.
Presentation: A colourless, medicated plaster, containing 2.250 mg of betamethasone valerate (corresponding to 1.845 mg of betamethasone). **Indications:** Indicated in adults for the treatment of inflammatory skin disorders which do not respond to treatment with less potent corticosteroids, such as eczema, lichenification, lichen planus, granuloma annulare, palmoplantar pustulosis and mycosis fungoides. Also suitable for chronic plaque psoriasis localized in difficult to treat areas (e.g., knees, elbows, and anterior face of the tibia). Overall, the surface area treated with BETESIL should not exceed 5% of the body surface). **Dosage and Administration:** Apply the medicated plaster to the skin area to be treated once a day. Do not exceed the maximum daily dose of six medicated plasters and the maximum treatment period of 30 days. A new medicated plaster must be applied every 24 hours. Wait at least 30 minutes between one application and the next. Once an appreciable improvement has been obtained, discontinue application and consider continuing treatment with a less potent corticosteroid. The safety and efficacy in children aged <18 years has not yet been established. For full details of usage please refer to the relevant section of the SmPC. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients listed in section 6.1. Cutaneous tuberculosis and viral skin infections (including vaccinia pustules, herpes zoster and herpes simplex). Exudative lesions and primary skin infections caused by fungi or bacteria (e.g. syphilitic skin lesions). Acne, acne rosacea, perioral dermatitis, skin ulcers, burns and frostbite. Do not apply to face. Do not use on patients under 18 years of age. **Precautions and Warnings:** Caution in patients with visual disturbance. Cataract, glaucoma or rare diseases such as central serous chorioretinopathy have been reported with systemic and topical corticosteroid use. Use of topical corticosteroids on large areas of the body and for prolonged periods, as well as the use of an occlusive dressing can cause a temporary suppression of the hypothalamus-pituitary-adrenal axis, leading to secondary hypoadrenalism and adrenal hypercorticism, including the Cushing's syndrome. In these situations, treatment should be discontinued gradually and under strict control of a doctor due to the risk of acute adrenal insufficiency. Sudden withdrawal of the treatment in psoriatic patients, may also lead to symptoms exacerbation or generalized pustular psoriasis. Prolonged use in diffuse psoriasis (except for the treatment of isolated plaques) or diffuse eczema or application on lesions located in skin folds is not recommended, as these conditions may increase systemic absorption. The use of occlusive bandages, especially with plastic material, may increase this effect. The symptoms of this are: facial redness, weight changes (fat increase in body and face and loss in legs and arms), reddish streaks on stomach, headache, menstrual alterations, or an increase in unwanted face and body hair. In this regard, it is known that certain skin areas (face, eyelids, armpits, scalp and scrotum) absorb more easily than others (skin on the knees, elbows, palms of the hands and feet on soles). Long term continuous or inappropriate use of topical steroids can result in the development of rebound flares after stopping treatment (topical steroid withdrawal syndrome). Application of topical medicinal products, especially if prolonged, may give rise to hypersensitivity reaction. Skin atrophy has also been reported after three-week treatment periods. In case of drug intolerance, for example if skin irritation or contact dermatitis occurs during treatment, it is necessary to stop the medicated plaster application and start suitable treatment (see section 4.8 of the SmPC, "Undesirable effects"). Corticosteroids may affect the results of the nitroblue tetrazolium test (NBT) for diagnosing bacterial infections by producing false negatives. Medicinal products containing corticosteroids must be used with caution in patients with impaired immune system function (T-lymphocytes) or in those being treated with immunosuppressive therapy. The product contains methyl parahydroxybenzoate and propyl parahydroxybenzoate, which may cause hypersensitivity reactions (possibly delayed). There are no or limited amount of data from the use of betamethasone valerate in pregnant women. Studies in animals have shown reproductive toxicity (see section 5.3). Betesil is not recommended during pregnancy and in women of childbearing potential not using contraception. **Undesirable Effects:** Commonly reported side effects are skin and subcutaneous tissue disorders, occurring in about 15% of patients treated. All cases reported during controlled clinical trials were found to be common (≥1/100, <1/10): skin atrophy, telangiectasia, pustules, papules, furuncle, erythema, pruritus, skin erosion. These undesirable effects are local effects on the skin in the plaster application area. The frequency of withdrawal syndrome is not known. No systemic effects have been observed. Prescribers should consult the summary of product characteristics for other more general considerations on side effects reported with use of corticosteroids for cutaneous use. **Precautions for Storage:** Do not store above 25°C. Store the medicated plaster in its original sachet to preserve its integrity. For storage conditions after first opening of the medicinal product, see SmPC. **Legal Category:** POM. **Package Quantities:** A carton containing four or eight envelopes, each envelope contains one 7.5 cm x 10 cm medicated plaster containing 2.250 mg of betamethasone valerate. **Marketing Authorisation Number and Holder:** PL 21039/0009. IBSA FARMACEUTICI ITÁLIA S.R.L. VIA MARTIRI DI CEFALONIA 2 LODI -26900 ITALY. **Basic NHS Price:** £13.98 per pack of four BETESIL® 2.250 mg medicated plasters. £27.46 per pack for eight BETESIL® 2.250 mg medicated plasters. **Date of preparation of Prescribing Information:** November 2023.
Further information can be found in the Summary of Product Characteristics or from: Derma UK Ltd, The Toffee Factory, Lower Steenbergs Yard, Quayside, Ouseburn, Walker Rd, Newcastle upon Tyne, Tyne and Wear, NE1 2DF.

Adverse events should be reported. Information about adverse event reporting can be found at www.mhra.gov.uk/yellowcard.
Adverse events should also be reported to Derma UK Ltd, UK on 0191 375 9020.

References:
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BET/113/0524
Date of preparation May 2024