

Case Series

Management of dermatoses with topical clobetasol propionate 0.025%

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ABSTRACT

The development of topical corticosteroids (TC) has enabled effective treatment of many dermatoses. The main therapeutic activity of topical corticosteroids is their nonspecific anti-inflammatory effect that primarily seems to be a result of their action on the chemical mediators of inflammation. Topical corticosteroids have also been shown to be antimitotic. Corticosteroids also play a vital role in cellular signaling, immune function and protein regulation. Clobetasol propionate (CP) 0.025% is a prescription corticosteroid medicine, used to treat moderate to severe plaque psoriasis in patients 18 years of age and older. It is a class I specialized cream formulation, that is free of propylene glycol, short-chain alcohols (e.g. ethanol), and sorbitan sesquioleate, a sorbitol-based emulsifier which is a common contact allergen used in many topical corticosteroid formulations. This case series discusses about management of different dermatoses using ImpozTM (clobetasol propionate) cream 0.025%.

Keywords: Clobetasol propionate 0.025%, Topical corticosteroid, Plaque psoriasis, Psoriasis

INTRODUCTION

A tremendous improvement has been observed in the recent years with therapeutic use of topical corticosteroids (TC) due to increased understanding of their mode of action, awareness of their side effects as well as introduction of new derivatives with specifically designed pharmacological properties.¹ Currently TC remain a pivotal treatment for skin disorders like psoriasis due to their effective anti-inflammatory properties; however, potential adverse effects associated with chronic

application limit long-term continuous therapy.² A number of factors, including potency, anticipated efficacy, vehicle formulation, and patient preference, directly influence the success or failure of any TC. Clobetasol propionate (CP) 0.025% is a class I TC topical cream formulation that is applied twice daily for treatment of moderate-to-severe plaque psoriasis in patients 18 years of age or older. The formulation does not contain the two most common contact allergens that is commonly found in many TC formulations: propylene glycol, a penetration enhancer and preservative, and sorbitan sesquioleate, an emulsifier.

In addition, the lack of propylene glycol and short-chain alcohols (e.g. ethanol), both of which exhibit a broad range of antimicrobial effects, in the CP 0.025% cream also reduces unnecessary alteration of the cutaneous microbiome.³

The present case series discusses the clinical experience, efficacy and safety of using CP 0.025% for treating various dermatological conditions.

CASE SERIES

Case 1: treatment of itchy lesions in the scrotum with Impoyz™ (clobetasol propionate) cream 0.025%: a case study report

A 50-year-old male presented with itchy lesions in the scrotum. He was obese but he did not have any other comorbidity, occupational risk, or family history of diabetes. There were no other provoking factors, such as weather, recent travel, change in skincare products, and change in medications. The vitals and systemic findings of the patient were normal, and he had no psychological and social sequelae. The lesions were approximately 2×2 cm in size with mild erythema at the center. Inflammation was not observed around the lesions. The skin had a crusty rash and was itchy and scaly (Figure 1a). The patient was diagnosed with psoriasis and was prescribed Impoyz™ (clobetasol propionate) cream 0.025% to be applied once daily as a thin film for 10 days. The cream was to be washed off after 3 hours. The patient was also advised to take bath twice a day for better management of the indication.

At a follow-up visit after 10 days, a remarkable improvement was observed in scaling; plaque elevation had reduced and itching had disappeared completely. Erythema and flares were absent (Figure 1b). Overall, the patient experienced complete relief with Impoyz™ (clobetasol propionate) cream 0.025%.

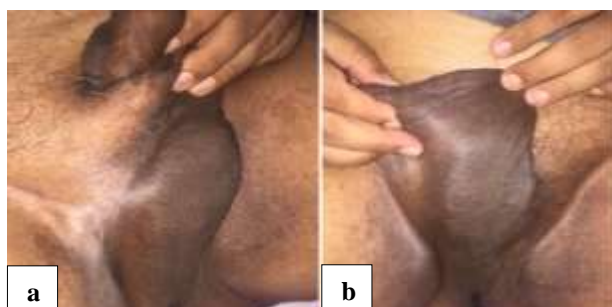


Figure 1: (a) Pre-treatment image of the lesions and (b) post-treatment image of the lesions.

Expert opinion

Impoyz™ (clobetasol propionate) cream 0.025% is very safe, reliable, and effective.

Case 2: management of plaque psoriasis with Impoyz™ (clobetasol propionate) cream 0.025%

A 43-year-old male presented with itching on the leg. He had diabetes mellitus; however, no significant family history was reported. Other comorbidities, occupational risks, or provoking factors, such as weather, recent travel, change in skincare products, and change in medications, were absent. The patient had no psychological and social sequelae, and his vitals and systemic findings were within normal limits. The lesions were medium in size, surrounded by inflammation and redness at the center. The skin had a vesicular rash and was warm, itchy, and scaly. Up to 3% of the body surface area was covered with lesions (Figure 2a). The patient was diagnosed with plaque psoriasis and was prescribed topical application of Impoyz™ (clobetasol propionate) cream 0.025% twice daily for 15 days along with a topical antifungal drug. The patient was also advised to improve personal hygiene.

At a follow-up visit after 15 days, a reduction was observed in scaling, plaque elevation, erythema, flares or relapses, and itching (Figure 2b). Overall, the severity of the disease was reduced after treatment with Impoyz™ (clobetasol propionate) cream 0.025%.



Figure 2: (a) Pre-treatment image of the lesions, and (b) post-treatment image of the lesions.

Expert opinion

Impoyz™ (clobetasol propionate) cream 0.025% is a comparatively safer option than the other 0.05% medicines. Owing to its dual technology, the cream has lesser side effects than other prescribed drugs and I would place it on the top. Impoyz™ (clobetasol propionate) cream 0.025% provided high patient satisfaction and can be prescribed for more patients.

Case 3: efficacy of Impoyz™ (clobetasol propionate) cream 0.025% in palmer psoriasis

A 45-year-old female presented with scaly plaques over the palms. She had diabetes mellitus. The patient had no history of allergy of dermatological conditions or medications taken. Significant family history or occupational risk were absent. Household work was an associated provoking factor in this case. Her vitals and systemic findings were normal, and she had psychological

and social sequelae. The size of the lesions was 5 cm with erythema at the centre and well demarcated. The skin was warm, itchy, and scaly with a crusty rash. Up to 1% of the body surface area was covered with lesions (Figure 3a). The patient was diagnosed with palmer psoriasis and was prescribed topical application of Impoyz™ (clobetasol propionate) cream 0.025% twice daily for 14 days along with a moisturizer. The patient was also advised to avoid contact with detergents.

At a follow-up visit after 14 days, scaling, flares or relapses, and restoring skin barrier had reduced, and an improvement was observed in plaque elevation (Figure 3b). Overall, good results were obtained, and the severity of the disease had decreased after treatment with Impoyz™ (clobetasol propionate) cream 0.025%.



Figure 3: (a) Pre-treatment image of the lesions and (b) post-treatment image of the lesions.

Expert opinion

Impoyz™ (clobetasol propionate) cream 0.025% demonstrates good results with minimum side effects. It can be used as first-line topical therapy.

Case 4: safety and efficacy of topical Impoyz™ (clobetasol propionate) cream 0.025% in the management of plaque psoriasis

A 35-year-old male presented with an itchy and scaly trunk. The patient did not have any other comorbidity, family history, or occupational risk. The vitals and systemic findings of the patient were within the normal range, and he had no psychological and social sequelae. Large plaques were present in the abdomen and the entire lower back. There was inflammation around the lesions, and the centre of the lesions was scaly with infiltration. The skin was warm, itchy, and scaly with a papular rash (Figure 4a and c). Up to 10–15% of the body surface area was covered with the lesion. The patient was diagnosed with plaque psoriasis and was prescribed topical application of Impoyz™ (clobetasol propionate) cream 0.025% to be applied twice daily. The patient was also advised to apply a moisturizer twice daily and take levocetirizine (5 mg) tablet.

At a follow-up visit after 14 days, erythema, itching, and flares or relapses were all reduced, and an improvement was observed in scaling and plaque elevation (Figure 4b and d). Overall, a decrease was observed in the severity of the disease with Impoyz™ (clobetasol propionate) cream 0.025%.



Figure 4: (a) Pre-treatment image of the lesions on the back, (b) post-treatment image of the lesions on the back, (c) pre-treatment image of the lesions on the abdomen, and (d) post-treatment image of the lesions on the abdomen.

Expert opinion

Impoyz™ (clobetasol propionate) cream 0.025% exhibits potent efficacy and safety with no adverse events. It can be used as first-line topical therapy.

Case 5: treatment of psoriasis with topical Impoyz™ (clobetasol propionate) cream 0.025%

A 7-year-old girl presented with itching and redness on her hands, arms, and buttocks. The patient did not have any other comorbidity or occupational risk but had a family history of asthma. Psychological and social sequelae were absent and her vitals were normal. Lesions were present in the forearms and ranged from 2 mm to 7 mm in size. Inflammation was present surrounding the lesions. The skin was warm, tender, itchy, and scaly with papular and vesicular rashes (Figure 5a). Up to 15–20% of the body surface area was covered with the lesion. The patient was diagnosed with psoriasis and was prescribed Impoyz™ (clobetasol propionate) cream 0.025% to be applied twice daily after cleansing the affected area with cetaphil. The patient was also advised to take oral and topical antihistamines. To improve personal hygiene and for better management of the indication, she was told to use a moisturizing bath soap and consume coconut water and saline water.

At a follow-up visit after 14 days, about 5% reduction was observed in scaling; plaque elevation had almost disappeared, and erythema, itching, and flares or relapses were all reduced by 65–75%. Mild pruritus was reported on exposure to the sun (Figure 5b).



Figure 5: (a) Pretreatment image of the lesions and (b) post-treatment image of the lesions.

Expert opinion

Impoyz™ (clobetasol propionate) cream 0.025% spreads well and is safe and well tolerated with no stinging sensation. The drug is a little less efficacious compared with 0.1% clobetasol propionate but nearly as effective as conventional clobetasol propionate and mometasone. It is, however, a safer option than conventional steroids as side effects are reduced to a great extent.

Case 6: treatment of itchy lesions in the arms and feet with Impoyz™ (clobetasol propionate) cream 0.025%: a case study report

A housewife presented with itchy and scaly lesions in her arms and legs. She was obese but did not have any other comorbidity or relevant family history. Physical examination revealed blood pressure as 120/82 mmHg and a pulse rate of 82/min. She experienced severe itching at times and also had psychological and social sequelae. The lesions were observed below the feet and were approximately 2×2 cm in size. Inflammation was observed around the lesions. The skin was warm, tender, itchy, and scaly (Figure 6a). The patient was diagnosed with psoriasis and was prescribed Impoyz™ (clobetasol propionate) cream 0.025% to be applied in small quantities, twice a day, for 15 days along with a moisturizer.

At a follow-up visit after 15 days, scaling, plaque elevation, and itching had reduced (Figure 6b). Overall, the disease severity had reduced after treatment with Impoyz™ (clobetasol propionate) cream 0.025%.



Figure 6: (a) Pre-treatment image of the lesions. (b) Post-treatment image of the lesions.

Expert opinion

Impoyz™ (clobetasol propionate) cream 0.025% demonstrates good results and is safe with no side effects. The drug spreads well and is easy to apply. Owing to its safety profile and given the lesser side effects, I place it over other steroids. Otherwise, drugs like tacrolimus and calcipotriol are better.

Case 7: management of psoriasis with Impoyz™ (clobetasol propionate) cream 0.025%

A 42-year-old female presented with itching over the dorsa of her legs. She did not have any comorbidity, occupational risk, or family history. The weather was an associated provoking factor in this case. Her vitals and systemic findings were normal, and she had no psychological and social sequelae. The size of the lesions was 2×4 cm. There was no inflammation surrounding the lesions, and the skin was itchy (Figure 7a). The patient was diagnosed with psoriasis and was prescribed a topical application of Impoyz™ (clobetasol propionate) cream 0.025% twice daily for 14 days.

At a follow-up visit after 14 days, a reduction was observed in scaling, plaque elevation, flares or relapses, erythema, and itching (Figure 7b). Overall, the severity of the disease had decreased with Impoyz™ (clobetasol propionate) cream 0.025%.



Figure 7: (a) Pre-treatment image of the lesions and (b) post-treatment image of the lesions.

Expert opinion

Impoyz™ (clobetasol propionate) cream 0.025% is the safest option and can be used as first-line topical therapy.

Case 8: safety and efficacy of topical Impoyz™ (clobetasol propionate) cream 0.025% in the management of plaque psoriasis

A 35-year-old male presented with pruritic red patches on his legs. He was obese but did not have any other comorbidity, occupational risk, or family history of psoriasis. There were no other provoking factors, such as weather, recent travel, change in skincare products, and change in medications. Psychological and social sequelae

were absent, and his systemic findings and vitals were normal. The lesions were 3×3 cm in size. There was inflammation around the lesions, and scaly plaques were observed at the center. The skin was itchy and scaly with a rash (Figure 8a). Up to 10% of the body surface area was covered with the lesion. The patient was diagnosed with plaque psoriasis and was prescribed Impoysz™ (clobetasol propionate) cream 0.025% to be applied once daily as a thin layer at night for 3 weeks.

At a follow-up visit after 3 weeks, erythema, itching, scaling, and plaque elevation had reduced (Figure 8b). Overall, a reduction was observed in the severity of the disease with Impoysz™ (clobetasol propionate) cream 0.025%.



Figure 8: (a) Pre-treatment image of the lesions and (b) post-treatment image of the lesions.

Expert opinion

Impoysz™ (clobetasol propionate) cream 0.025% exhibits potent efficacy with very satisfying results. The drug is safe with no side effects.

Case 9: Treatment of itchy lesions on the legs with Impoysz™ (clobetasol propionate) cream 0.025%: a case study report

A 56-year-old female presented with itching over both the legs, predominantly around the ankle. She did not have any other comorbidity, relevant family history, or occupational risk. Her vitals and systemic findings were normal, and she had no psychological and social sequelae. The lesions were observed in the ankle joint and were approximately 20 cm in size. Inflammation was present around the lesions. The skin was itchy and scaly with a rash and plaque (Figure 9a). The patient was diagnosed with plaque psoriasis and was prescribed Impoysz™ (clobetasol propionate) cream 0.025% to be applied only over the lesion, twice a day, for 14 days along with a moisturizer. She was also advised to take antihistamines and zinc-based medicines. The use of cream could be reduced to once a day after the initial twice-daily therapy.

At a follow-up visit after 14 days, scaling, plaque elevation, erythema, and itching had reduced (Figure 9b). Flares or relapses were mild. Overall, the disease severity

was moderate after treatment with Impoysz™ (clobetasol propionate) cream 0.025%.

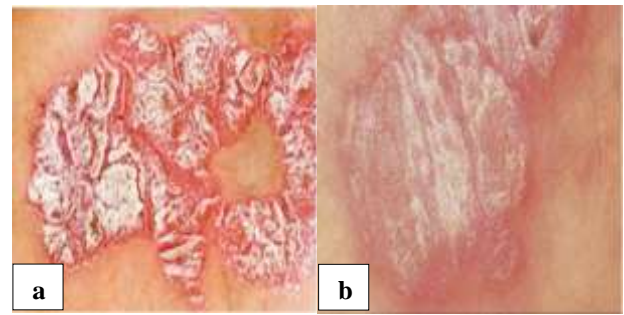


Figure 9: (a) Pre-treatment image of the lesions and (b) post-treatment image of the lesions.

Expert opinion

Impoysz™ (clobetasol propionate) cream 0.025% demonstrated potent efficacy with safety. Owing to its effectiveness and minimal side effects, I would place it on the top. Impoysz™ (clobetasol propionate) cream 0.025% had good penetration and enables faster recovery.

Case 10: efficacy of Impoysz™ (clobetasol propionate) cream 0.025% in psoriasis

A 17-year-old boy presented with itchy skin lesions in the neck. The boy experienced itching on and off for the past 6 months. He did not have any other comorbidity, relevant family history, or occupational risk. The vitals and systemic findings of the patient were normal, and psychological and social sequelae were absent. The largest and the smallest lesions were approximately 5×5 cm and 2×1 cm in size, respectively. Inflammation was present around the lesions, and the center of the lesion was scaly. The skin was itchy and scaly with an urticarial rash. Up to 20% of the body surface area was covered with lesions (Figure 10a).

The patient was diagnosed with psoriasis and was prescribed a topical application of Impoysz™ (clobetasol propionate) cream 0.025% twice daily for 14 days.

At a follow-up visit after 14 days, an improvement was observed in erythema and itching (Figure 10b). The flares or relapses had also reduced. Overall, a reduction was observed in the severity of the disease with Impoysz™ (clobetasol propionate) cream 0.025%.

Expert opinion

Impoysz™ (clobetasol propionate) cream 0.025% can be used as first-line therapy. It is fast-acting and provides improved outcomes even with the once-daily application. The drug reduces flares and shows no steroid-induced complications.

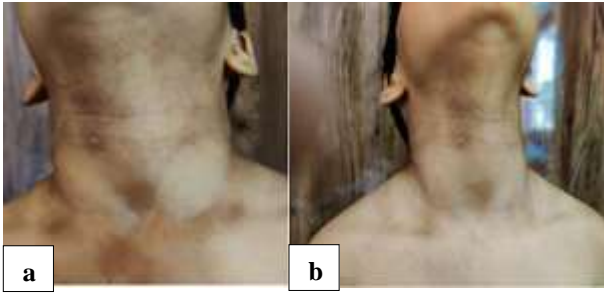


Figure 10: (a) Pre-treatment image of the lesions and (b) post-treatment image of the lesions.

DISCUSSION

Psoriasis is a chronic, recurrent, genetically determined, inflammatory dermatosis commonly affecting the skin, scalp and joints. It is caused by various triggers including infections, drugs, physical and emotional factors. It ranges in severity from mild to severe. A significant deterioration in the quality of life is observed in patients with moderate to severe psoriasis. Since 1952, topical corticosteroids have been the first choice in the treatment of and inflammatory dermatoses.⁴

Results from the phase III DFD06-CD-004 trial conducted by Srinivas et al in patients with moderate-to-severe psoriasis showed that CP 0.025% demonstrate significant superiority to the vehicle. The primary endpoint of percentage of subjects with treatment success defined as investigator global assessment (IGA) = 0 or 1 and at least a 2-grade reduction from baseline) at the day 15 visit was achieved by 30.2% and 9% of patients in the CP 0.025% and vehicle arms, respectively ($p < 0.001$). Also, the proposed secondary endpoint of percent of subjects with treatment success at day 8 visit defined as an IGA of 0 or 1 with at least a 2-grade reduction from baseline was achieved by 15.7% of patients treated with CP 0.025 versus 5.6% of patients in the vehicle treatment arm ($p = 0.006$).⁵

CONCLUSION

CP 0.025% cream demonstrates potent efficacy and safety in patients with moderate-to-severe psoriasis. Evidence from clinical studies and clinical experience of patients in outpatient setting support the results observed in various trials. Therefore, CP 0.025% is considered as potent topical treatment by physicians for the treatment of different types of psoriasis.

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REFERENCES

1. Sterry W. Therapy with topical corticosteroids. Arch Dermatol Res. 1992;284(1):27-9.
2. Del Rosso Do JQ. Combination topical therapy for the treatment of psoriasis. J Drugs Dermatol. 2006;5(3):232-4.
3. Del Rosso JQ. Topical corticosteroid therapy for psoriasis—a review of clobetasol propionate 0.025% cream and the clinical relevance of penetration modification. J Clin Aesthet Dermatol. 2020;13(2):22-9.
4. Sukarowska BG, Lipozencic J, Vrzogic P. Topical corticosteroids and corticosteroid sparing therapy in psoriasis management. Acta Med Croatica. 2007;61(4):375-81.
5. Impozyz TM (clobetasol propionate) Cream. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/nda/2017/209483Orig1s000MedR.pdf. Accessed on 10 December 2021.

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