

Case Series

Clobetasol propionate cream 0.025%: a topical therapeutic for dermatological disorders

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ABSTRACT

Due to the anti-inflammatory and vasodilator effects of topical corticosteroids, they help in treating atopic eczema, psoriasis, chronic hand eczema, and localized vitiligo, among other dermatological diseases. Clobetasol propionate (CP) is the most popular topical medication used to treat plaque psoriasis. It has anti-inflammatory, antimetabolic, antipruritic, and immunosuppressive characteristics. The USFDA has approved CP 0.025% cream for the treatment of moderate-to-severe psoriasis in adults. Propylene glycol, short-chain alcohols, and sorbitol-based emulsifiers are all recognized contact allergens, and the formulation has exhibited hypoallergenic effects. CP 0.025% is an effective and safe agent due to its high active ingredient penetration and minimal systemic absorption. The clinical experience of employing CP 0.025% cream in diverse dermatologic disorders is discussed in this case series, with a focus on its efficacy and safety.

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

INTRODUCTION

Topical corticosteroids (TCs) have been the standard of care for a variety of dermatological diseases that are characterized by dry, scaly, crusted, or erythematous skin and are linked with inflammation and itch for the past seven decades.¹

TCs have been used to treat a variety of skin conditions, including psoriasis, atopic dermatitis, seborrheic dermatitis, contact dermatitis, and other inflammatory dermatoses, due to their anti-inflammatory properties, reduction in neutrophil and monocyte recruitment, stabilization of cellular and lysosomal membranes, and vasoconstrictive properties.²

Clobetasol propionate (CP) is the most popular topical drug used to treat psoriasis in the world. CP, a fifth-generation corticosteroid, is the most powerful topical steroid available. It can be used in a wide range of inflammatory conditions.³

The new CP 0.025% cream formulation has been approved for the treatment of moderate-to-severe psoriasis in adult patients when administered twice daily. Unlike prior CP formulations, CP 0.025% cream contains no recognized contact allergens, such as propylene glycol, short-chain alcohols, or sorbitol-based emulsifiers (0.05%).² Furthermore, when compared to prior formulations, the CP 0.025% cream formulation is associated with lower CP serum levels and less hypothalamic-pituitary-adrenal axis suppression.⁴

The clinical experience of employing CP 0.025% in terms of safety and efficacy in diverse dermatological disorders is discussed in this case series.

CASE SERIES

Case 1

Efficacy of Impoyz™ (CP) cream 0.025% topical therapy: a case study report

A 50-year-old male patient complained of scaly and reddish lesions all over the body especially over the back of the body for the past 6 months. He had hypertension, diabetes mellitus and obesity however, no significant family history was reported.

The patient was a bank officer which was a significant occupational risk factor and was suffering from depression. His vitals were stable and systemic findings were within normal limits. Lesions were present over the back, upper limbs and lower limbs and were approximately 5-10 cm in size. There was inflammation around the lesions, and the center of the lesions was scaly. The skin was tender, warm, itchy, and scaly with papular rash (Figure 1).



Figure 1: Image of the lesion on the back (a) pre-treatment; and (b) post-treatment.

Up to 50% of the Body surface area (BSA) was covered with lesions. The patient was diagnosed with plaque

psoriasis and was prescribed Impoyz™ (CP) cream 0.025% to be used for 2 weeks twice a day followed by the application of a moisturizer. At the follow-up visit on the 14th day, itching, erythema, scaling, and plaque elevation had reduced and facial redness had also reduced. There was an overall reduction in flares/relapses (Figure 1). Overall, there was a marked improvement in the severity of the disease with the use of topical therapy.

Expert opinion

The application of Impoyz™ (CP) cream 0.025% is safe as it has a good compliance and it can be used in the management of psoriasis.

Case 2

Efficacy of Impoyz™ (CP) cream 0.025% in topical therapy: a case study report

A 9-year-old female presented with 3-4 itchy lesions over the back of the trunk. She had no medical or personal history. Her father had a history of chronic urticaria and her mother had a history of allergic rhinitis. There were no occupational risk factors. Her vitals were stable and systemic findings were within normal limits. The patient had no psychological or social sequelae. The lesions were located on the back of the trunk. The largest coin shaped lesion was 3×3 cm in size. Inflammation around the lesion was present. The center of the lesion was clear. Rash, tenderness, warmth itching and scaling were observed. The rash was macular. The patient was diagnosed with plaque psoriasis (Figures 2).

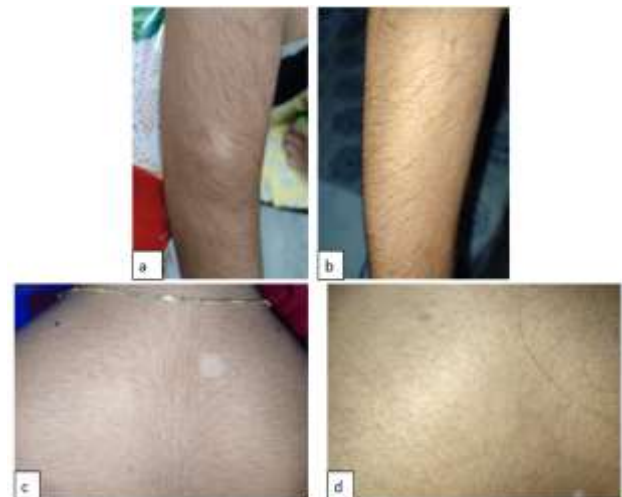


Figure 2: (a) Pre-treatment image of the dry and itchy skin patches on the hands; (b) post-treatment image of the cured patches indicating improvement; (c) pre-treatment image of the dry and itchy skin patches over the back; and (d) post-treatment image of the cured patches indicating improvement.

The patient was instructed to apply topical Impoyz™ (CP) cream 0.025% to the affected skin area two times daily.

The patient was given specific instructions like cleaning the affected area before application. The patient was further advised to use tablet Xyzal™ (S) once a day for 10 days. No antifungal was prescribed for the patient but she was advised to avoid dust.

At the follow-up visit on the 14th day, erythema and itching had resolved (Figures 2). Overall, the disease severity had reduced significantly.

Expert opinion

In this case, the application of Impoyz™ (CP) cream 0.025% is considered safe and can be used as a first line of treatment in atopic dermatitis. Impoyz™ (CP) cream 0.025% is much better in the treatment of atopic dermatitis, mild to moderate plaque psoriasis, dermatitis and vitiligo lesions.

Case 3

Management of psoriasis with Impoyz™ (CP) cream 0.025% topical therapy: a case study report

A 34-year-old male patient complained of scaly and itchy lesions over the trunk. The patient did not have any medical, personal or family history. The patient was an officer which was a significant occupational risk factor and was suffering from depression. His vitals and systemic findings were within normal limits. Lesions were present over the abdomen and back. There was inflammation around the lesions, and the center of the lesions was scaly with infiltrations. The skin was tender, warm, itchy, and scaly with papular rash (Figure 3). Up to 10%-15% of the BSA was covered with lesions. The patient was diagnosed with plaque psoriasis and was prescribed Impoyz™ (CP) cream 0.025% to be used twice a day followed by the application of moisturizer. The patient was also advised to take Tab Xyzal (S) tablet daily for 10 days.

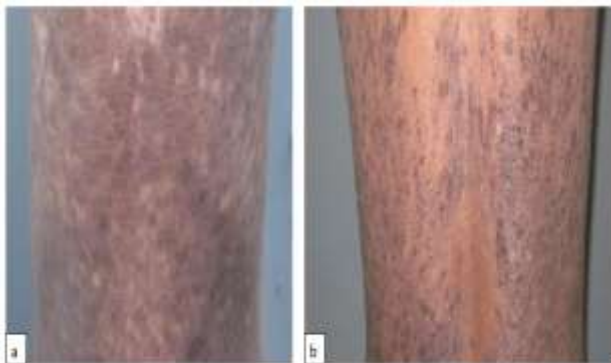


Figure 3: Image of the lesion on the trunk (a) pre-treatment; and (b) post-treatment.

At the follow-up visit on the 14th day, itching and erythema had reduced. There was an overall reduction in flares/relapses (Figure 3). Overall, there was a decrease in the severity of the disease.

Expert opinion

The application of Impoyz™ (CP) cream 0.025% is safe with no adverse events. It has a good efficacy and safety. It can be used as the first line of treatment in the management of psoriasis.

Case 4

Treatment of plaque psoriasis with Impoyz™ (CP) cream 0.025%: a case study report

A 39-year-old male presented with liquefaction over the right foot. He had hypertension with no other occupational risk, or significant family history. The vitals and systemic findings of the patient were normal, and he had no psychological or social sequelae. The lesion was approximately 4×4 cm in size and was present on the lower portion of the leg. There was no inflammation surrounding the lesions. The center of the lesions was normal. On skin examination, rash, tenderness, warmth, scaling and itching were present. The patient was diagnosed with plaque psoriasis (Figures 4). The patient was prescribed Impoyz™ (CP) cream 0.025% for 2 weeks.

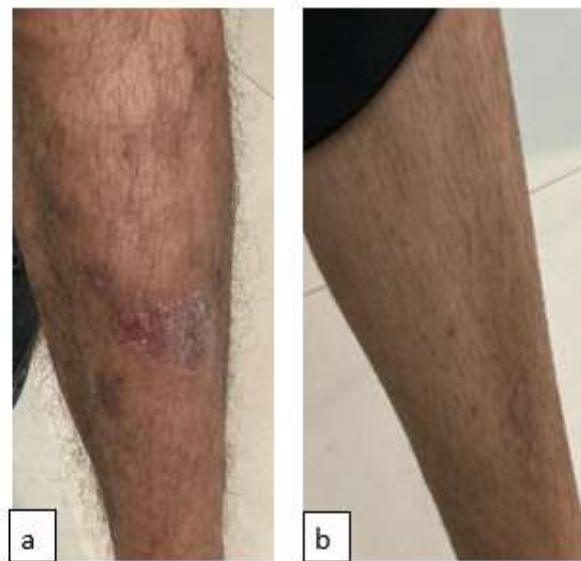


Figure 4: Image of the lesion on the leg (a) pre-treatment; and (b) post-treatment.

At a follow-up visit after 2 weeks, there was a significant decrease in erythema, scaling, plaque elevation, itching and flares/relapses (Figures 4). Overall, the disease severity had decreased significantly.

Expert opinion

The Impoyz™ (CP) cream 0.025% is very good to use. It can also be recommended as the first line of treatment as it has less side effects and good efficacy. It should be recommended for use in all steroid-responsive dermatosis.

Case 5

Impoyz™ (CP) cream 0.025% is efficacious in psoriasis patients

A 45-year-old male presented with itching over extensors. The patient had diabetes mellitus and obesity with no family history. No occupational risk factor was reported. His blood pressure was abnormal (110/90 mmHg) However, no abnormality was detected in systemic findings and psychological or social sequelae. The lesion was present on the lower legs, back and arms. The center of the lesions was clear with no inflammation. The skin was tender, warm, itchy, and scaly with a papular rash. The patient was diagnosed with plaque psoriasis (Figure 5). The patient was prescribed Impoyz™ (CP) cream 0.025% to be applied twice a day. The patient was given hygiene instructions to bath daily and apply moisturizer.



Figure 5: Image of the lesions (a) pre-treatment; and (b) post-treatment.

At the follow-up visit on the 14th day, there was a significant improvement in scaling, plaque elevation, erythema and itching (Figure 5). Overall, the severity of the disease had reduced following the topical application of Impoyz™ (CP) cream 0.025%.

Expert opinion

Impoyz™ (CP) cream 0.025% had good safety and compliance. It can be used as the first line of treatment in controlling the disease as the results are fast and excellent. Overall, Impoyz™ (CP) cream 0.025% is good.

Case 6

Impoyz™ (CP) cream 0.025% is efficacious in psoriasis patients

A 40-year-old male presented with itchy, erythematous scaly patches over the right dorsal region of the foot. He had no significant medical, personal or family history. No

occupational risk was reported. No abnormality was detected in vitals and systemic findings, and psychological or social sequelae were absent. The lesions were of size 5×10 cm on the right foot. The center of the lesions was relatively clearer and accompanied by inflammation. The skin was tender, itchy, warm and scaly with a papular and crusty rash (Figure 6). The patient was diagnosed with psoriasis and was prescribed Impoyz™ (CP) cream 0.025% to be applied twice a day. A moisturizing cream was suggested to be applied.



Figure 6: Image of the lesions on the right foot (a) pre-treatment; and (b) post-treatment.

On the 14th day follow-up visit, there was a remarkable decrease in scaling and plaque elevation. The erythema had reduced and the itch had disappeared (Figure 6). Overall, there was a good improvement following the topical application of Impoyz™ (CP) cream 0.025%.

Expert opinion

Impoyz™ (CP) cream 0.025% is safe and can be used in the long term for the management of psoriasis. It is very effective in improving symptoms and the appearance of lesions. It can be recommended for limited plaque-type psoriasis.

Case 7

Treatment with Impoyz™ 0.025% cream in psoriasis lesion localized on the foot: a case report

A 40-year-old male presented lesions on both the palm and sole of the foot. He had no other medical or personal history. The patient was a shopkeeper which was a significant occupational risk factor. Vitals and systemic findings were normal and psychological or social sequelae were absent. Lesions of around 2×3 cm and 2×4 cm were located on the palm and soles of the feet. The center of the lesion was erythematous. The skin appearance was scaly and itchy (Figure 7). The patient was diagnosed with plaque psoriasis.



Figure 7: (a) Pre-treatment image of the lesion located on the left foot; (b) post-treatment image of the lesion showing improvement; (c) pre-treatment image of the lesion located on the ankle of the feet; and (d) post-treatment image of the lesion showing improvement.

Topical Impoyz™ (CP) cream 0.025% was prescribed to be applied to the affected skin area at night for 15 days. The patient was further advised to clean the foot with warm water. At the follow-up on the 15th day, erythema and plaque elevation had reduced substantially. Post-treatment, there was a significant improvement in scaling. Plaque elevation, erythema and itching had reduced (Figures 7). Overall, the disease severity had decreased after the treatment.

Expert opinion

Impoyz™ (CP) cream 0.025% can be considered a first-line treatment for managing patients with erythema with minimal side effects.

Case 8

Management of plaque psoriasis with Impoyz™ (CP) cream 0.025%

A 63-year-old male presented with macular lesions with rash, itching, redness and pustules on both the lower legs below the knee. The patient was diabetic and hypertensive. There was no other comorbidity or significant family history. The patient was a farmer which was a significant occupational risk factor. The vitals and systemic findings of the patient were normal, and he had no psychological or social sequelae. The complaint increased during winters. The lesions were approximately 3×4 inches in size on the right leg and 4×2 inches on the left leg. There was no inflammation surrounding the lesions. The center of the lesions was scaly. On skin examination, rash, tenderness, warmth, scaly and itching were present. The skin had a macular and crusty rash. The patient was diagnosed with plaque psoriasis (Figures 8).



Figure 8: Image of the lesions on the leg (a) pre-treatment; and (b) post-treatment.

The patient was prescribed Impoyz™ (CP) cream 0.025% for 15 days to be applied on every alternate day. He was also prescribed Metrogyl cream™ and antihistamines. The patient was also additionally advised to bath twice a day and stop visiting fields for 1 week.

At a follow-up visit after 2 weeks, there had been a significant decrease in scaling and erythema (Figure 8). Overall, an improvement in treatment was seen with Impoyz™ (CP) cream 0.025%.

Expert opinion

Impoyz™ (CP) cream 0.025% is considered safe and indicated as the first line of treatment as there was no telangiectasia or irritation seen when used for longer duration.

The overall experience using Impoyz™ (CP) cream was quite satisfactory.

Case 9

Efficacy of Impoyz™ (CP) cream 0.025% in topical therapy: a case study report

A 35-year-old male presented with whitish macules on the chest. He had no medical or personal history. He also had no family history of a similar dermatological condition. There were no occupational risk factors. His physical and systemic examinations were normal. The patient had no psychological or social sequelae. The lesions were located on the chest. The largest lesion was 10×4 cm and the smallest lesion was 2×3 cm in size. Inflammation around the lesion was absent. The center of the lesion was clear or erythematous. No rash, tenderness, warmth, scaling or

itching was observed. It was a macular rash. The patient was diagnosed with plaque psoriasis. Less than 10% of the BSA was covered with lesions (Figure 9).

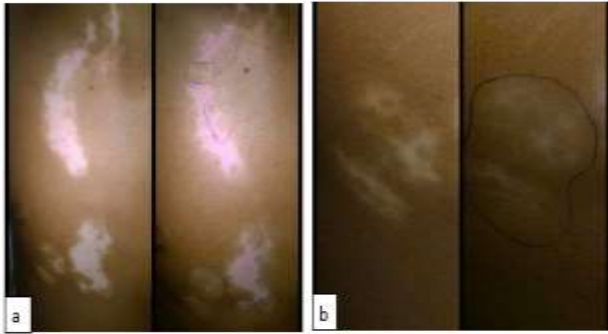


Figure 9: (a) Pre-treatment image of the dry and scaly skin patches on the trunk; and (b) post-treatment image of the cured patches indicating improvement.

The patient was instructed to apply topical Impoyz™ (CP) cream 0.025% to the affected skin twice a day for 1 month. At the follow-up visit on the 14th day, the disease severity had reduced significantly by 50% (Figure 9).

Expert opinion

In this case, the application of Impoyz™ (CP) cream 0.025% can be considered safe. It can be considered as the first line of treatment in treating psoriasis and vitiligo and in reducing inflammation. The overall experience in using it was good.

Case 10

Treatment of plaque psoriasis with Impoyz™ (CP) cream 0.025%

A 48-year-old male presented with multiple itchy maculopapular scaly lesions on both the legs for the past 1 years. He had no other comorbidity, occupational risk, or significant family history. The vitals and systemic findings of the patient were normal, and he had no psychological or social sequelae. The patient's mother also presented the same history in the family. The lesions were approximately 5-6 cm in size and were present on the legs. There was inflammation surrounding the lesions. The center of the lesions was erythematous. On skin examination, rash, tenderness, warmth, scaling and itching were present. The skin had a maculopapular rash. The patient was diagnosed with plaque psoriasis (Figure 10). The patient was prescribed Impoyz™ (CP) cream 0.025% for 15 days. The patient was additionally prescribed desloratidine twice a day for 15 days.

At a follow-up visit after 2 weeks, erythema, scaling, plaque elevation, itching, or facial redness had reduced (Figure 10). Overall, a decrease in disease severity was observed and an improvement in the treatment was seen with Impoyz™ (CP) cream 0.025%.

Expert opinion

Impoyz™ (CP) cream 0.025% is a potent steroid and is safe to use. It can also be indicated as the first line of treatment to decrease the systemic side effects of CP 0.05%.

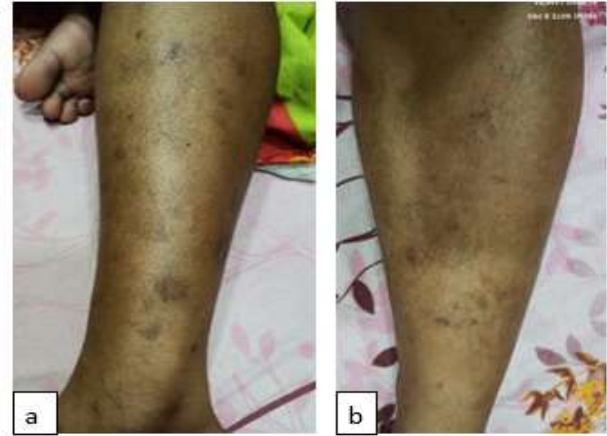


Figure 10: Image of the lesions on the leg (a) pre-treatment; and (b) post-treatment.

DISCUSSION

The most prevalent kind of psoriasis is plaque-type psoriasis, which is characterized by erythematous scaly plaques on the scalp, lower back, elbows, umbilical region, intergluteal cleft, and knees. CP has been shown to be effective in the treatment of a variety of chronic skin disorders.⁵ Topical use of CP is thought to help decrease inflammation and pruritis in atopic dermatitis and psoriasis. The efficacy, skin acceptability, and safety of CP 0.025% cream have been established in two pivotal randomized controlled trials and a maximum use safety study.² The CP 0.025% cream composition is devoid of typical contact allergens and uses diethylene glycol monoethyl ether to boost active ingredient penetration without causing systemic uptake.⁶ In the DFD06-CD-005 trial conducted by Srinivas et al in patients with moderate-to-severe psoriasis, CP 0.025% was superior to the vehicle with the difference being statistically significant. In the CP 0.025% arm 30.1% of patients achieved 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 compared with and 9.7% of patients in the vehicle arm ($p < 0.001$). The 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 14.2% and 1.6% of patients in the CP 0.025% and vehicle arms, respectively ($p = 0.001$).⁷

CONCLUSION

CP 0.025% cream is an efficacious therapeutic for moderate-to-severe psoriasis. The minimal side effects,

good penetrating capacity and promising potency in outpatients makes it a preferred drug of choice among physicians for the treatment of various types of psoriasis.

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Ethical approval: Not required

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