

# DERMOVATE

## *Clobetasol* propionate

### QUALITATIVE AND QUANTITATIVE COMPOSITION

*DERMOVATE* Cream and Ointment contains *Clobetasol* propionate 0.05 % w/w.

### PHARMACEUTICAL FORM

Cream and Ointment.

### CLINICAL PARTICULARS

#### Indications

- Psoriasis (excluding widespread plaque psoriasis)
- Recalcitrant eczemas
- Lichen planus
- Discoid lupus erythematosus
- Other skin conditions which do not respond satisfactorily to less potent steroids

#### Dosage and Administration

Apply sparingly to the affected area once or twice daily. Therapy should be discontinued when control is achieved. Treatment should not be continued for more than four weeks without the patient's condition being reviewed. Repeated short courses of *DERMOVATE* may be used to control exacerbations. If continuous steroid treatment is necessary, a less potent preparation should be used.

In very resistant lesions, especially where there is hyperkeratosis, the anti-inflammatory effect of *DERMOVATE* can be enhanced, if necessary, by occluding the treatment area with polythene film.

Overnight occlusion only is usually adequate to bring about a satisfactory response. Thereafter improvement can usually be maintained by application without occlusion.

#### Children

*DERMOVATE* is contraindicated in children under one year of age.

Children are more likely to develop local and systemic side effects of topical corticosteroids and, in general, require shorter courses and less potent agents than adults.

Care should be taken when using *DERMOVATE* to ensure the amount applied is the minimum that provides therapeutic benefit.

## **Elderly**

The greater frequency of decreased hepatic or renal function in the elderly may delay elimination if systemic absorption occurs. Therefore the minimum quantity should be used for the shortest duration to achieve the desired clinical benefit.

## **Renal / Hepatic Impairment**

In case of systemic absorption (when application is over a large surface area for a prolonged period) metabolism and elimination may be delayed therefore increasing the risk of systemic toxicity. Therefore the minimum quantity should be used for the shortest duration to achieve the desired clinical benefit.

## **Contraindications**

The following conditions should not be treated with *DERMOVATE*

- Hypersensitivity to clobetasol, or to any of the excipients in the preparation
- Primary skin lesions caused by infection with fungi or bacteria
- Primary cutaneous viral infections (e.g. herpes simplex, chickenpox)
- Rosacea
- Acne vulgaris
- Pruritus without inflammation
- Perianal and genital pruritus
- Perioral dermatitis

*DERMOVATE* is contraindicated in dermatoses in children under one year of age, including dermatitis.

## **Warnings and Precautions**

*DERMOVATE* should be used with caution in patients with a history of local hypersensitivity to corticosteroids. Local hypersensitivity reactions (see *Adverse Reactions*) may resemble symptoms of the condition under treatment.

Local hypersensitivity reactions such as erythema, rash, pruritis, urticaria, local skin burning and allergic contact dermatitis may occur at the site of application and may resemble symptoms of the condition under treatment.

If signs of hypersensitivity appear, application should be stopped immediately.

Manifestations of hypercortisolism (Cushing's syndrome) and reversible hypothalamic-pituitary-adrenal (HPA) axis suppression, leading to glucocorticosteroid insufficiency, can occur in some individuals as a result of increased systemic absorption of topical steroids. If either of the above are observed, withdraw the drug gradually by reducing the frequency of application, or by substituting a less potent corticosteroid. Abrupt withdrawal of treatment may result in glucocorticosteroid insufficiency (see *Adverse Reactions*).

Risk factors for increased systemic effects are:

- Potency and formulation of topical steroid
- Duration of exposure
- Application to a large surface area
- Use on occluded areas of skin (e.g. on intertriginous areas or under occlusive dressings (in infants the nappy may act as an occlusive dressing))
- Increasing hydration of the stratum corneum
- Use on thin skin areas such as the face
- Use on broken skin or other conditions where the skin barrier may be impaired
- In comparison with adults, children and infants may absorb proportionally larger amounts of topical corticosteroids and thus be more susceptible to systemic adverse effects. This is because children have an immature skin barrier and a greater surface area to body weight ratio compared with adults.

Visual disturbance has been reported by patients using systemic and/or topical corticosteroids. If a patient has blurred vision or other visual disturbances, consider evaluation of possible causes which may include cataract, glaucoma or central serous chorioretinopathy.

### **Children**

Long-term continuous topical therapy should be avoided where possible, particularly in infants and children, as adrenal suppression can occur even without occlusion.

Children are more susceptible to develop atrophic changes with the use of topical corticosteroids. If *DERMOVATE* is required for use in children, it is recommended that the treatment should be limited to only a few days and reviewed weekly.

### **Infection risk with occlusion**

Bacterial infection is encouraged by the warm, moist conditions within skin folds or caused by occlusive dressings. When using occlusive dressings, the skin should be cleansed before a fresh dressing is applied.

### **Use in psoriasis**

Topical corticosteroids should be used with caution in psoriasis as rebound relapses, development of tolerances, risk of generalised pustular psoriasis and development of local or systemic toxicity due to impaired barrier function of the skin have been reported in some cases. If used in psoriasis careful patient supervision is important.

### **Concomitant infection**

Appropriate antimicrobial therapy should be used whenever treating inflammatory lesions which have become infected. Any spread of infection requires withdrawal of topical corticosteroid therapy and administration of appropriate antimicrobial therapy.

### **Chronic leg ulcers**

Topical corticosteroids are sometimes used to treat the dermatitis around chronic leg ulcers. However, this use may be associated with a higher occurrence of local hypersensitivity reactions and an increased risk of local infection.

### **Application to the face**

Application to the face is undesirable as this area is more susceptible to atrophic changes. If used on the face, treatment should be limited to only a few days.

### **Application to the eyelids**

If applied to the eyelids, care is needed to ensure that the preparation does not enter the eye, as cataract and glaucoma might result from repeated exposure.

### **Interactions**

Co-administered drugs that can inhibit CYP3A4 (e.g. ritonavir and itraconazole) have been shown to inhibit the metabolism of corticosteroids leading to increased systemic exposure. The extent to which this interaction is clinically relevant depends on the dose and route of administration of the corticosteroids and the potency of the CYP3A4 inhibitor.

### **Pregnancy and Lactation**

#### **Fertility**

There are no data in humans to evaluate the effect of topical corticosteroids on fertility. Clobetasol administered subcutaneously to rats had no effect upon mating performance; however, fertility was decreased at the highest dose (see *Pre-Clinical Safety Data*).

#### **Pregnancy**

There are limited data from the use of *DERMOVATE* in pregnant women.

Topical administration of corticosteroids to pregnant animals can cause abnormalities of foetal development (see *Pre-Clinical Safety Data*).

The relevance of this finding to humans has not been established. Administration of *DERMOVATE* during pregnancy should only be considered if the expected benefit to the mother outweighs the risk to the foetus. The minimum quantity should be used for the minimum duration.

### **Lactation**

The safe use of topical corticosteroids during lactation has not been established.

It is not known whether the topical administration of corticosteroids could result in sufficient systemic absorption to produce detectable amounts in breast milk.

Administration of *DERMOVATE* during lactation should only be considered if the expected benefit to the mother outweighs the risk to the infant.

If used during lactation *DERMOVATE* should not be applied to the breasts to avoid accidental ingestion by the infant.

### **Effects on Ability to Drive and Use Machines**

There have been no studies to investigate the effect of *DERMOVATE* on driving performance or the ability to operate machinery. A detrimental effect on such activities would not be anticipated from the adverse reaction profile of topical *DERMOVATE*.

### **Adverse Reactions**

Adverse drug reactions (ADRs) are listed below by MedDRA system organ class and by frequency. Frequencies are defined as: very common ( $\geq 1/10$ ), common ( $\geq 1/100$  and  $< 1/10$ ), uncommon ( $\geq 1/1,000$  and  $< 1/100$ ), rare ( $\geq 1/10,000$  and  $< 1/1,000$ ) and very rare ( $< 1/10,000$ ), including isolated reports.

### **Post-marketing data**

#### Infections and Infestations

Very rare                      Opportunistic infection

#### Immune System Disorders

Very rare                      Local Hypersensitivity

#### Endocrine Disorders

Very rare                      Hypothalamic-pituitary adrenal (HPA) axis suppression:

Cushingoid features: (e.g. moon face, central obesity),  
delayed weight gain/growth retardation in children,  
osteoporosis, hyperglycaemia/glucosuria,  
hypertension, increased weight/obesity, decreased  
endogenous cortisol levels, alopecia, trichorrhexis

## Eye Disorders

Very rare                      Cataract, central serous chorioretinopathy, glaucoma

## Skin and Subcutaneous Tissue Disorders

Common                      Pruritus, local skin burning/skin pain

Uncommon                    Skin atrophy\*, striae\*, telangiectasias\*

Very rare                      Skin thinning\*, skin wrinkling\*, skin dryness\*,  
pigmentation changes\*, hypertrichosis, exacerbation of  
underlying symptoms, allergic contact dermatitis/dermatitis,  
pustular psoriasis, erythema, rash, urticaria, acne

## General Disorders and Administration Site Conditions

Very rare                      Application site irritation/pain

\*Skin features secondary to local and/or systemic effects of hypothalamic-pituitary adrenal (HPA) axis suppression.

## Overdose

### Symptoms and signs

Topically applied *DERMOVATE* may be absorbed in sufficient amounts to produce systemic effects. Acute overdosage is very unlikely to occur, however, in the case of chronic overdosage or misuse the features of hypercortisolism may occur (see *Adverse Reactions*).

### Treatment

In the event of overdose, *DERMOVATE* should be withdrawn gradually by reducing the frequency of application or by substituting a less potent corticosteroid because of the risk of glucocorticosteroid insufficiency.

Further management should be as clinically indicated or as recommended by the national poisons centre, where available.

# PHARMACOLOGICAL PROPERTIES

## Pharmacodynamics

### ATC code

D07AD01

### Mechanism of action

Topical corticosteroids act as anti-inflammatory agents via multiple mechanisms to inhibit late phase allergic reactions including decreasing the density of mast cells, decreasing chemotaxis and activation of eosinophils, decreasing cytokine production by lymphocytes, monocytes, mast cells and eosinophils, and inhibiting the metabolism of arachidonic acid.

### Pharmacodynamic effects

Topical corticosteroids, have anti-inflammatory, antipruritic, and vasoconstrictive properties.

## Pharmacokinetics

### Absorption

Topical corticosteroids can be systemically absorbed from intact healthy skin. The extent of percutaneous absorption of topical corticosteroids is determined by many factors, including the vehicle and the integrity of the epidermal barrier. Occlusion, inflammation and/or other disease processes in the skin may also increase percutaneous absorption.

Mean peak plasma clobetasol propionate concentrations of 0.63 nanograms/ml occurred in one study eight hours after the second application (13 h after an initial application) of 30 g clobetasol propionate 0.05 % ointment to normal individuals with healthy skin. Following the application of a second dose of 30 g clobetasol propionate cream 0.05 %, mean peak plasma concentrations were slightly higher than the ointment and occurred 10 h after application. In a separate study, mean peak plasma concentrations of approximately 2.3 nanograms/ml and 4.6 nanograms/ml occurred respectively in patients with psoriasis and eczema three hours after a single application of 25 g clobetasol propionate 0.05 % ointment.

### Distribution

The use of pharmacodynamic endpoints for assessing the systemic exposure of topical corticosteroids is necessary due to the fact that circulating levels are well below the level of detection.

## **Metabolism**

Once absorbed through the skin, topical corticosteroids are handled through pharmacokinetic pathways similar to systemically administered corticosteroids. They are metabolised, primarily in the liver.

## **Elimination**

Topical corticosteroids are excreted by the kidneys. In addition, some corticosteroids and their metabolites are also excreted in the bile.

## **Pre-clinical Safety Data**

### **Carcinogenesis / Mutagenesis**

#### **Carcinogenesis**

Long-term animal studies have not been performed to evaluate the carcinogenic potential of clobetasol propionate.

#### **Genotoxicity**

Clobetasol propionate was not mutagenic in a range of *in vitro* bacterial cell assays.

#### **Fertility**

In fertility studies, subcutaneous administration of clobetasol propionate to rats at doses of 6.25 to 50 micrograms/kg/day produced no effects on mating, and fertility was only decreased at 50 micrograms/kg/day.

#### **Pregnancy**

Subcutaneous administration of clobetasol propionate to mice ( $\geq 100$  micrograms/kg/day), rats (400 micrograms/kg/day) or rabbits (1 to 10 micrograms/kg/day) during pregnancy produced foetal abnormalities including cleft palate.

In the rat study, where some animals were allowed to litter, developmental delay was observed in the F1 generation at  $\geq 100$  micrograms/kg/day and survival was reduced at 400 micrograms/kg/day. No treatment-related effects were observed in F1 reproductive performance or in the F2 generation.



# PHARMACEUTICAL PARTICULARS

## List of Excipients

### Cream:

Glyceryl monostearate  
Cetostearyl alcohol  
Chlorocresol  
Sodium citrate  
Citric acid (monohydrate)  
Purified water  
Arlacel 165  
Beeswax substitute 6621  
Propylene glycol

### Ointment:

Propylene glycol  
White soft paraffin  
Sorbitan sesquioleate

## Incompatibilities

No incompatibilities have been identified.

## Shelf Life

The expiry date is indicated on the packaging.

## Special Precautions for Storage

### Cream

Store below 30°C.

### Ointment

Store below 30°C.

## Nature and Contents of Container

### Cream

Collapsible, aluminium tubes, coated internally with an epoxy resin based lacquer and closed with a cap.

### Ointment

Collapsible, aluminium tubes, coated internally with an epoxy resin based lacquer or unlacquered and closed with a cap.

### **Instructions for Use/Handling**

Do not dilute *DERMOVATE* Cream.

Patients should be advised to wash their hands after applying *DERMOVATE*, unless it is the hands that are being treated.

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