PRODUCT MONOGRAPH

MEDROL* Acne Lotion

(methylprednisolone, aluminum chlorhydroxide, sulfur lotion)

Topical Corticosteroid Acne Compound

Pfizer Canada Inc.
17,300 Trans-Canada Highway
Kirkland, Quebec H9J 2M5

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ACTION

MEDROL Acne Lotion has an anti-inflammatory action by virtue of its content of methylprednisolone, as astringent and antiperspirant action by virtue of its content of aluminum chlorhydroxide and a keratolytic effect by virtue of its sulfur content. Sulfur has also demonstrated some antibacterial activity at the concentration used.

INDICATIONS AND CLINICAL USE

MEDROL Acne Lotion is indicated for the control of acne vulgaris in the adolescent and young adult. It is also useful in some cases of acne rosacea and seborrheic dermatitis.

CONTRAINDICATIONS

MEDROL Acne Lotion is contraindicated in tuberculosis of the skin and in the presence of skin viral diseases such as herpes simplex, vaccinia and varicella. It is also contraindicated in patients known to be sensitive to any ingredients in this lotion.

WARNINGS

Use in Pregnancy:

Corticosteroids are generally teratogenic in laboratory animals when administered systemically at relatively low dosage levels. The more potent corticosteroids have been shown to be teratogenic after dermal application in laboratory animals. There are no adequate and well-controlled studies in pregnant women on teratogenic effects from topically applied corticosteroids. Therefore, topical corticosteroids should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. Drugs of this class should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time.

PRECAUTIONS

General:

If irritation develops, topical corticosteroids should be discontinued and appropriate therapy instituted.

In the presence of dermatological infections, the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly, the corticosteroid should be discontinued until the infection has been adequately controlled.

Avoid contact with the eyes. If there are signs of irritation or sensitivity, application should be discontinued. The patient should be advised to inform subsequent physicians of the prior use of corticosteroids.

Systemic absorption of topical corticosteroids has produced reversible hypothalamic-pituitary-adrenal (HPA) axis suppression, manifestations of Cushing's syndrome, hyperglycemia, and glucosuria in some patients. Conditions which augment systemic absorption include the application of the more potent steroids, use over large surface areas, prolonged use, and the addition of occlusive dressings. Therefore, patients receiving a large dose of a potent topical steroid applied to a large surface area or under an occlusive dressing should be evaluated periodically for evidence of HPA axis suppression by using the urinary free cortisol and ACTH stimulation tests. If HPA axis suppression is noted, an attempt should be made to withdraw the drug, to reduce the frequency of application, or to substitute a less potent steroid. Recovery of HPA axis function is generally prompt and complete upon discontinuation of the drug. Infrequently, signs and symptoms of steroid withdrawal may occur, requiring supplemental systemic corticosteroids.

Use in Children:

Children may absorb proportionally larger amounts of topical corticosteroids than mature patients because children have a larger skin surface area to body weight ratio. This could lead to greater susceptibility to topical corticosteroid-induced HPA axis suppression and Cushing's syndrome.

Hypothalamic-pituitary-adrenal (HPA) axis suppression, Cushing's syndrome, and intracranial hypertension have been reported in children receiving topical corticosteroids. Manifestations of adrenal suppression in children include linear growth retardation, delayed weight gain, low plasma cortisol levels, and absence of response to ACTH stimulation. Manifestations of intracranial hypertension include bulging fontanelles, headaches and bilateral papilledema.

Administration of topical corticosteroids to children should be limited to the least amount compatible with an effective therapeutic regimen. Chronic corticosteroid therapy may interfere with the growth and development of children.

Nursing Mothers:

It is not known whether topical administration of corticosteroids could result in sufficient systemic absorption to produce detectable quantities in breast milk. Systemically administered corticosteroids are secreted into breast milk in quantities not likely to have a deleterious effect on the infant. Nevertheless, caution should be exercised when topical corticosteroids are administered to a nursing woman.

Laboratory Tests:

The following tests may be helpful in evaluating the HPA axis suppression:

Urinary free cortisol test

ACTH stimulation test

Information for the Patient:

Patients using topical corticosteroids should receive the following information and instructions:

1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes.
2. Patients should be advised not to use this medication for any disorder other than for which it was prescribed.
3. The treated skin area should not be bandaged or otherwise covered or wrapped as to be occlusive unless directed by the physician.

4. Patients should report any signs of local adverse reactions especially under occlusive dressing.
5. Parents of pediatric patients should be advised not to use tight-fitting diapers or plastic pants on a child being treated in the diaper area, as these garments may constitute occlusive dressings.

ADVERSE REACTIONS

The following local adverse reactions have been reported with topical corticosteroids, but may occur more frequently with the use of occlusive dressings. These reactions are listed in an approximate decreasing order of occurrence: Burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, maceration of the skin, secondary infection, skin atrophy, striae, and miliaria.

If excessive dryness of the skin occurs, reduce amount and frequency of application of MEDROL® Acne Lotion. This effect is more commonly seen in patients with fair complexions or sensitive skin. Localized atrophy or striae have been reported with the use of topical corticosteroids particularly when used in the intertriginous areas. The remote possibility of systemic corticosteroid absorption does exist, particularly if extensive areas are treated or treatment is maintained for prolonged periods. It is estimated that 0.18 mg of methylprednisolone acetate would be absorbed daily if the contents of a 30 cc bottle were used over a period of 7 days.

SYMPTOMS AND TREATMENT OF OVERDOSAGE

No cases have been reported. Excessive applications should be immediately removed with mild soap and water.

Accidental ingestion has not been reported. Should this occur, vomiting should be induced and appropriate measures taken to treat any irritation of the oral mucosa which might occur. The absorption of a single high dose of methylprednisolone should cause no concern.

DOSAGE AND ADMINISTRATION

MEDROL Acne Lotion should be applied to all lesions once or twice a day taking care to avoid contact with the eyes. The skin should be washed with a bland soap prior to each application. The frequency of application will vary from person to person depending on his susceptibility to the drying effect of the lotion. To obtain satisfactory results, dryness of the skin should be produced, but not to the point of flaking or peeling.

In patients with very sensitive skin, application every other day may control acne lesions.

PHARMACEUTICAL INFORMATION

DRUG SUBSTANCE

Proper Name: methylprednisolone, aluminum chlorhydroxide, sulfur (elemental)

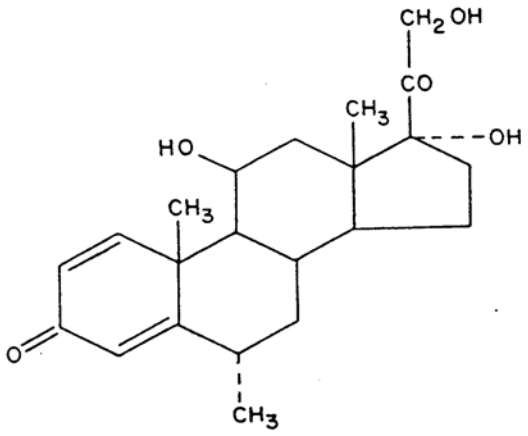
Chemical Name: (1) Pregna-1,4-diene-3,20-dione, 11,17,21-trihydroxy-6-methyl-, (6α,11β)-;

(2) 11β,17,21-Trihydroxy-6α-methylpregna-1,4-diene-3,20-dione.

Molecular Formula: $C_{22}H_{30}O_5$, $Al_2Cl(OH)_5.2H_2O$

Molecular Weight: 374.48, 210.48

Structural Formula:



COMPOSITION

Sulfidal, propylene glycol, methylprednisolone, perfume oil, polysorbate 85, lexemul AR, polyethylene glycol 400 distearate, cetyl palmitate, polysorbate 80 NF, butylparaben NF, methylcellulose 15 CPS, methylparaben NF, aluminum chlorhydroxide complex, purified water.

AVAILABILITY

MEDROL Acne Lotion is available in 75 mL plastic squeeze bottles. Each mL contains:

methylprednisolone acetate	2.5 mg
aluminum chlorhydroxide complex	100.0 mg
sulfur	50.0 mg

PHARMACOLOGY

The anti-inflammatory effect of topical corticosteroids is well known. The methylprednisolone acetate in MEDROL Acne Lotion has this beneficial effect in the treatment of acne.

Aluminum chlorhydroxide complex has both antiperspirant and astringent effect when applied topically and both these effects are desirable in the treatment of acne.

Sulfur has long been used as a keratolytic agent in the treatment of acne and exerts this effect when included in MEDROL Acne Lotion. Sulfur also has some antibacterial effect when applied topically and this effect is desirable in treating mild infections seen as a part of acne vulgaris.

Systemic absorption of methylprednisolone when applied topically is estimated at $1.22 \pm 0.47\%$ from normal skin per day. Application of MEDROL Acne Lotion would therefore be expected to have no detectable systemic corticosteroid effect even when used in large quantities over prolonged periods of time.

TOXICOLOGY

Ocular irritation studies were performed in New Zealand white rabbits and the ocular irritation effect of MEDROL Acne Lotion was regarded as slight and non-progressive.

Long-term animal studies have not been performed to evaluate the carcinogenic potential or the effect of fertility of topical corticosteroids.

Studies to determine mutagenicity with prednisolone and hydrocortisone have revealed negative results.

BIBLIOGRAPHY

1. Chren MM, Bickers DR. Dermatological Pharmacology: corticosteroids. In: Goodman AG, Rall TW, Nies AS, Taylor P, editors. The Pharmacological Basis of Therapeutics. Eighth Ed. New York: Pergamon Press, 1990:1573-6.