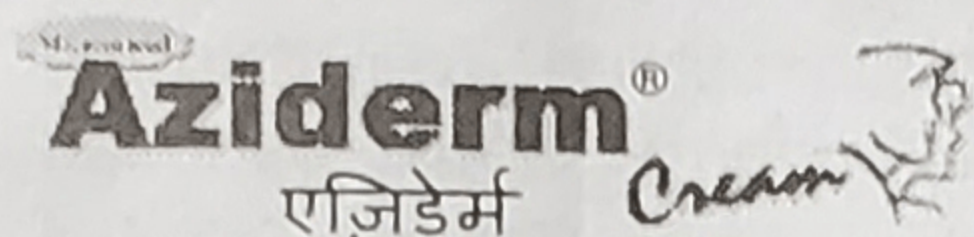


For the use of Registered Medical Practitioner only.

Azelaic Acid Cream 10% / 20%



Composition :

Aziderm 10% - Azelaic Acid..... 10% w/w
Benzoic Acid IP 0.2% w/w
(as preservative)
in a cream base.

Aziderm - Azelaic Acid 20% w/w
in a cream base.

Description: Azelaic Acid is a naturally occurring C_9 dicarboxylic acid.

Structural Formula:

$HOOC-(CH_2)_7COOH$

Chemical Name:

1,7-heptanedicarboxylic acid

Empirical Formula: $C_9H_{16}O_4$

Molecular weight: 188.22

Pharmacodynamics:

Azelaic Acid in Acne: Topical application of 20% Azelaic Acid cream caused marked reduction in the densities of cutaneous micrococci and intrafollicular *Propionibacterium Sp.*, and decreased the free fatty acid content of skin surface lipids¹. Topical 20% Azelaic acid cream also showed an antikeratinising effect on acne affected skin which was related to decreased synthesis of filaggrin (keratin filament aggregating protein); hence a reduction in follicular hyperkeratosis may partly underlie the drug's antiacne action¹. Since Azelaic acid affects the cornification process of the epidermal cells, it exerts a therapeutically positive effect on the formation of comedones. Azelaic acid also inhibits the release of oxygen radical from neutrophilic granulocytes, and thus may have a clinically relevant anti inflammatory action in acne².

Azelaic acid in hyperpigmentation:

Azelaic acid appears to act selectively on hyperactive and abnormal melanocytes, by competitively inhibiting tyrosinase, the key enzyme for melanogenesis³. The anti-proliferative and cytotoxic actions

of Azelaic acid may be due to reversible inhibition of variety of oxidoreductase enzymes like DNA polymerase and mitochondrial enzymes of the respiratory chain. Differences in cellular permeability and / or metabolic activity may account for the greater susceptibility of hyperactive and abnormal epidermal cells (keratinocytes and melanocytes) to the antiproliferative and depigmenting actions of Azelaic acid.

Pharmacokinetics: Following a single application of Aziderm to human skin in vitro, Azelaic acid penetrates into the stratum corneum (approximately 3 to 5% of the applied dose) and other viable skin layers (up to 10% of the dose is found in the epidermis and dermis). Negligible cutaneous metabolism occurs after topical application. Approximately 4% of the topically applied Azelaic acid is systemically absorbed. Azelaic acid is mainly excreted unchanged in urine but undergoes some beta-oxidation to shorter chain dicarboxylic acids. After topical treatment of Aziderm in humans, plasma concentration and urinary excretion of Azelaic acid are not significantly different from baseline levels.

Indications: Aziderm is effective against hyperpigmentary disorders (such as melasma, post inflammatory melanoderma, Lentigo maligna) Aziderm is also effective in acne (comedonal and inflammatory acne)

Contra-indications: Hypersensitivity to Propylene glycol. Aziderm should not be used by pregnant, lactating women and in children below 12 years, as it has not been studied in these circumstances.

Warning: There have been isolated reports of hypopigmentation after use of Azelaic acid. Patients with dark complexion should be monitored for early signs of hypopigmentation.

Precautions: General: If sensitivity or severe irritation develops with use of Aziderm, treatment should be discontinued and appropriate therapy instituted.

Information to patients: Patients should be instructed to keep Aziderm away from mouth, eyes, and other mucous membranes. If Aziderm comes in contact with the eyes then it should be thoroughly rinsed with copious amounts of water. Avoid the use of occlusive dressing or wrappings. Due to low pH of Azelaic acid, temporary skin irritation (pruritus, burning, or stinging) may occur when Aziderm is applied to broken or inflamed skin, usually at the start of treatment. However, this irritation commonly subsides if treatment is continued. If it continued, Aziderm should be applied only once-a-day, or the treatment should be stopped until these effects have subsided. If troublesome irritation persists, the patient should consult their physician.

Side effects: The most common adverse reactions occurring in approximately 1-5% of patients were pruritus, burning, stinging and tingling. Other adverse reactions such as erythema, dryness, rash, peeling, irritation, dermatitis, and contact dermatitis were reported in less than 1% of subjects. There is the potential for experiencing allergic reactions with use of Aziderm.

Dosage and administration: Before Aziderm is applied, the skin should be thoroughly cleaned with clear water or, if applicable a mild skin-cleansing agent. Astringent toiletries should generally be avoided. Aziderm cream should be gently rubbed into cleansed skin 2 to 3 minutes to ensure adequate penetration. The cream is to be applied on the affected areas of skin twice a day (morning and evening). As a guide a daily dose of 2g (1g Per application) will be sufficient. In the event of excessive irritation of the skin, the frequency of use of Aziderm should be reduced to once a day until the irritation ceases or the treatment should be temporarily interrupted. It is important to continue the use of Aziderm regularly over the entire period

of treatment. The duration of use of Aziderm varies from person to person and depends on the severity of the acne/ hyperpigmentation. To obtain the best results, Aziderm should be used regularly over several months but not more than six months. Improvement in majority of patients with inflammatory lesions usually occurs within four weeks.

Storage: Store all drugs properly and keep them out of the reach of children. Store between 15°C-30°C (59°-86°F) Protect from freezing.

Usage and precautions:

1. Avoid exposure to sunlight. To avoid becoming susceptible to sunburn, do not go out in the sunlight after applying the cream. Use any sunscreen lotion or ideally use an umbrella in such a case.
2. Sometimes there may be an appearance of new acne pimples. This is due to the action of Azelaic acid on previously unseen lesions.
3. There may be some discomfort or peeling during the early days of treatment. This is not experienced by everyone. This indicates that your skin is adjusting to the medication.
4. Continue the prescription until your physician instructs you. Be patient to get good results with Azelaic acid treatment.
5. Local skin irritation (itching & burning) may occur, but regress in course of time.
6. Avoid cosmetics that contain high concentration of alcohol or lime.

This preparation should be used strictly under medical supervision only.

Presentation:

Aziderm-10% 15g tubes

Aziderm- 15g tubes

References:

Andrew Fitton and Karen L. Goa: *Drugs*: 1991; 780-798.
Akamatsu H et al; *Arch Dermatol Res*; 1991; 283; 162-166
Nazzaro-Porro M et al; *J Invest Dermatol*; 1978a; 71; 205-208

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