

Pacific Pharmaceuticals Ltd.

Lahore, Pakistan

Apridin® 10 % Gel



Penetrates Deeper - Treats Herpes Faster

When viral infection is limited to the skin When viral infection is limited to the skin

Topical therapy should be preferred 1

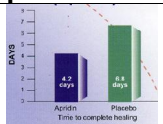
Because of

- ❖ Convenience
- ❖ Reduced systemic side effects
- ❖ Higher concentration of anti-viral agent at the site of infection
- ❖ Greater efficacy

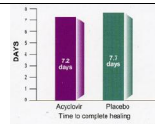
Apridin fulfills this criteria exclusively

- ❖ **Apridin** **contains** **Idoxuridine**, a topical virustatic agent, worldwide approved and clinically used for the treatment of Herpes Simplex Labialis & Herpes Zoster infections.1 **Mode of action :** Idoxuridine (**Apridin**) is incorporated into viral DNA instead of thymidine, so inhibiting replication of the virus. 2 **Dimethyl Sulfoxide**, the most appropriate & safe lipophilic drug vehicle that strongly enhances the drug penetration through the skin to manage Herpes Simplex virus infections and Herpes Zoster infections effectively with good tolerability. 1
- ❖ **Apridin** significantly reduces the severity of viral infections.1
- ❖ **Apridin** is more adherent to the skin, thus allowing a higher local bioavailability of drug,1

Idoxuridine (Apridin) demonstrates remarkably shorter healing time than topical acyclovir & placebo.



The study result showed a faster and more marked regression of symptomatology with doxuridine (Apridin) than with placebo.3



There was no statistically significant difference in the modification of clinical criteria of efficacy between topical acyclovir and placebo treated patients.4

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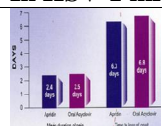
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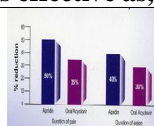


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In HSV-1 infection, topical idoxuridine (Apridin) is as effective as, but more tolerated, than oral acyclovir.



The two treatments appeared almost equally effective, although a statistically significant lower time to loss of hard crust was observed in idoxuridine (Apridin) treated patients.⁵



When the treatment was started "early" in the prodrome or erythema stage, idoxuridine (Apridin) reduced the duration of pain & lesions significantly greater than an oral acyclovir treatment.⁶

- ❖ **Apridin** does not cause renal failure & neurotoxicity as reported with oral acyclovir.
- ❖ **Oral Acyclovir** shows acute renal failure and neurotoxicity.^{7, 8}

Apridin effectively treats Herpes Zoster

Idoxuridine (Apridin) had a considerable effect on zoster, both in shortening the healing time and in reducing the duration of zoster neuralgia.⁹

Apridin 10% Gel

- ❖ Offers better local bioavailability
- ❖ Greater efficacy
- ❖ Cosmetically ideal
- ❖ Easy to apply, just with a help of finger and doesn't require a brush

BREIF PRESCRIBING INFORMATION

1 gram of gel contains: Idoxuridine USP 100mg , Dimethyl Sulfoxide (DMSO) BP 600mg, Excipient, Carbopol and PEG
Chemical Classification: Idoxuridine is a pyrimidine nucleoside structurally related to thymidine, chemically it is 2-Deoxy-5-iodouridine. Therapeutic Classification: Antiviral agent (topical virustatic agent). Properties: Idoxuridine affects the transcription of viral DNA by becoming incorporated in the latter in phosphorylated form instead of thymidine. Virustatic activity is particularly marked against the DNA herpes simplex virus and is manifested by the alleviation of pain and the drying and healing of characteristic skin lesions. Used as a solvent, DMSO promotes absorption into the deeper regions of the skin. Pharmacokinetics: Following systemic absorption, idoxuridine is rapidly metabolised into iodouracil, uracil and iodide, all of which are excreted in the urine. since absorption via the skin is extremely slight, no measurable concentration are generally detected in the blood after topical application. DMSO is rapidly absorbed from the skin (15 to 30%). it has a plasma half life of 12 to 15 hours and is excreted in the urine and faeces. One of its metabolites, dimethylsulphide, also known as allocin, is excreted via the skin and lungs. the epidermal penetration of idoxuridine is increased 5 to 25 folds by the presence of DMSO. The active ingredient thus reaches its site of action in the deepest layers of skin. Indication: Apridin is indicated in the

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management of herpes simplex (herpes labialis). Dosage: Treatment should be initiated as soon as possible, i.e as soon as the first clinical signs appear. Apridin is applied to the affected area of skin 4 to 5 times daily. Treatment should not be administered for more than 4 days. (Maximum for 21 days) Contra-indication: Apridin must not be prescribed for patients who are allergic to idoxuridine, DMSO or to any other ingredient of this product & particularly with severe kidney & liver disorders. Precaution: Avoid contact with eyes and eye area. Do not use any tube previously opened by others in order to prevent contamination by idoxuridine-resistant viruses. Use in pregnancy and during lactation: Foetal abnormalities have been observed in reproduction studies carried out in certain animal species following oral administration of idoxuridine and parenteral administration of DMSO. No studies have so far been conducted in pregnant women. Under these circumstances the preparation should be used only when the anticipated benefits justify the potential risk to the foetus. There are no data relating to the passage of idoxuridine or DMSO in breast-milk Interactions: No topical or systemic corticosteroids should be administered during apridin treatment in order to prevent viral spreading . DMSO can potentiate the percutaneous absorption of other topical preparation. this should be borne in mind during concomitant use of other local treatment. Other Informations: this preparation may trigger discolouration on coming into contact with synthetic clothing . the treated area of skin should therefore be delimited during application (e.g with gauze). Adverse Reaction: Transient burning, erythema and pruritus have been observed in approximately 15% patients. Allergic reactions have been reported. Patients may experience a transient garlic-like taste following application. this is due to the DMSO metabolite, allocin the skin in the treated area may become soft after prolonged use. these symptoms disappear once treatment is discontinued. Expiration: the preparation must not be used once the expiry date indicated on the container has elapsed. Storage: Store in a dry place at room temperature (15 to 25C) out of the reach of children .Packaging: Apridin 10% aluminum tubes each containing 5g of gel. Overdosage: The following symptoms of poisoning due to oral ingestion of the gel were observed: Hepatotoxicity, Hepatotoxicity, Leucopenia, Thrombocytopenia, Glossitis, Stomatitis, Alopecia and Gastro-intestinal disorders. Treatment: Immediate administration of activated charcoal with water. Liver function should be monitored by checking bilirubin, transaminase and alkaline phosphate serum levels.

Ref: 1. Data on file. 2. Martindale, The complete drug reference, thirty second edition, 1999. 3. Finzi AF, Besana F Apridin Gel 10% : Clinical evaluation in patients affected with herpes simplex. Double blind comparative clinical trial. Milan, July 23, 1990. 4 . Spruance et al. Treatment of herpes simplex labialis with topical acyclovir, J Infect Dis 1982; 146: 8590. 5. Spruance et al. Early application of topical idoxuridine in dimethyl sulfoxide shortens the course of herpes simplex: a multicentre placebo-controlled trial. J Infect Dis 1990a; 161:191-7. 6. Spruance et al. Treatment of recurrent herpes simplex with oral acyclovir. J Infect Dis 1990b; 161:85-90. 7. Becker BN et al. Rapidly progressive acute renal failure due to acyclovir: case report and review of the literature. Am J Kidney Dis 1993; 22:611-5. 8. Adair JC et al. Acyclovir neurotoxicity: clinical experience and review of the literature. South Med J 1994; 87: 1227-31. 9. Rodney Dawber. Idoxuridine in herpes zoster: Further evaluation of intermittent topical therapy. BMJ 1974; 2: 526-27.