


ARTWORK

LEO Pharma A/S
Internal Market Access

Scale	Get-up	Material No	Sent by e-mail
100%	SG + LK	063330-XX	▼
Subject	INS 148 x 210 mm		Date
Colour	Black		Sign.
		HSI	Sign.

Preparation Strength Packsize			Travogen® Cream		Place of production Italy		
Segrate no: 00000000		Replaces Segrate no: 85456725		Comments: Page 2 of 2			

IIT004-00 - Page 1 + 2 - 148 x 210 mm – DRA_90040

Pharmacodynamic properties

Pharmacotherapeutic group: Imidazole and triazole derivatives
ATC Code: D01AC05
Isoconazole and its salt isconazole nitrate is for use in the treatment of superficial fungal diseases of the skin. It displays a very broad spectrum of antimicrobial action. It is effective against dermatophytes and yeasts, yeast-like fungi (including the causative organism of pityriasis versicolor) and molds, as well as against the gram-positive bacteria *in-vitro* and against the causative organism of erythrasma.

Pharmacokinetic properties

Isoconazole penetrates rapidly into human skin from Travogen cream and reaches maximum drug concentrations in the horny layer and in the living skin 1 hour after application. High concentrations were maintained for at least 7 hours (horny layer: approx. 3500 µg/ml corresponding to 7 mmol/l, living epidermis approx. 20 µg/ml (40 µmol/l), dermis approx. 3 µg/ml (6 µmol/l). Removal of the horny layer prior to the application increased isoconazole concentrations in the living skin approximately by a factor of 2. Drug concentrations in the horny layer and the epidermis exceeded minimum inhibitory and biocidal antimycotic concentrations (MIC) of most important pathogens (dermatophytes, molds and yeasts) several fold and reached (MIC) values in the dermis.
In a further study, isoconazole nitrate could still be detected above the MIC in the stratum corneum and the hair follicles at one week after termination of a two-week application period. In some subjects, isoconazole nitrate could even be detected 14 days after the last application.
Isoconazole is not metabolically inactivated in the skin. Systemic load due to percutaneous absorption is low. Even after removal of the horny layer less than 1% of the applied dose has reached the systemic circulation within 4 hours exposure time. The percutaneously absorbed portion was too low to permit investigating the fate of isoconazole within the human organism.
Investigation of metabolism after intravenous administration
After intravenous administration of ³H-ICN to rats and dogs radiolabeled substances (parent drug and all metabolites) were mainly excreted by the biliary pathway. Within 24 hours after administration approximately 85% respectively 80% of the dose were already excreted within 24 hours. In the rat / dog approximately 5 / 7.5% of the recovery were excreted with the urine and 95 / 92.5% with the bile. The bile was also the main excretion pathway for radiolabeled substances after dermal application ³H-ICN to guinea pigs and dogs. This was also confirmed in two humans: after intravenous administration of 0.5 mg³H-ICN one third of radiolabeled substances were excreted with the urine and two thirds were excreted with the feces within 7 days.
The spectrum of metabolites in the animals was very similar to that observed in the two human subjects. The major metabolites found were 2,4-dichloromandelic acid; 2[(2,6- dichlorobenzyl) -oxyl-2-(2,4-dichlorophenyl)- acetic acid and 1-(2,4-dichlorophenyl)-2- imidazole-1-yl-ethanol.

List of excipients

Polysorbate 60
Sorbitan stearate
Cetostearyl alcohol
Paraffin, heavy liquid
Paraffin, white soft
Water, purified

Incompatibilities

Not applicable

Shelf-Life

Please refer to labels

Storage Conditions

Store below 30°C.
Store all drugs properly and keep them out of reach of children.

Instructions for use/handling

No special requirements.

Dosage form and packaging available

Tubes of 20 g

Name and address of manufacturer

LEO Pharma Manufacturing Italy S.r.l.
Via E. Schering, 21, 20090 Segrate (MI) Italy.

Date of Revision of Package Insert

14 April 2016

Singapore 85456725

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