Lesprot

(Pantoprazole Sodium)
Delayed-Release Tablets, USP

لیسپروٹ

(پینٹوپرازول سوڈیم) ڈیلیڈ ریلیز ٹیبلیٹس

DESCRIPTION: Lesprot contains the active substance Pantoprazole. Pantoprazole is a selective "proton pump inhibitor", a medicine which reduces the amount of acid produced in your stomach. It is used for treating acid-related diseases of the stomach and intestine.

COMPOSITION:
Lesprot 20mg tablets: Each enteric coated tablet contains:
Pantoprazole Sodium eq. to Pantoprazole USP ... 20mg. [USP Specs.]
Lesprot 40mg tablets: Each enteric coated tablet contains:
Pantoprazole Sodium eq. to Pantoprazole USP ... 40mg. [USP Specs.]

INDICATION AND USAGE:
Lesprot is indicated for use in adults and adolescents 12 years of age and above for:
- Reflux esophagitis

Pantoprazole is indicated in adults for:
- Eradication of Helicobacter pylori (H. pylori) in combination with appropriate antibiotic therapy in patients with H. pylori associated ulcers.
- Gastric and duodenal ulcer.
- Zollinger-Ellison Syndrome and other pathological hyper secretory conditions.

Dosage:

Indication	Dose	Frequency
Short Treatment of Erosive Esophagitis associated with GERD		
Adults	40mg	Once daily for up to 8wks
Children (5 years and older)		
≥ 15kg < 40kg	20mg	Once daily for up to 8wks
≥ 40kg	40mg	
Maintenance of healing of Erosive Esophagitis		
Adults	40mg	Once daily
Pathological Hyper secretory conditions including Zollinger-Ellison		
Adults	40mg	Twice daily

CLINICAL PHARMACOLOGY: Mechanism of Action: Pantoprazole is a proton pump inhibitor (PPI) that suppresses the final step in gastric acid production by covalently binding to the (H+, K+)-ATP ase enzyme system at the secretory surface of the gastric parietal cell. This effect leads to inhibition of both basal and stimulated gastric acid secretion, irrespective of the stimulus. The binding to the (H+, K+)-ATP ase results in a duration of anti-secretory effect that persists longer than 24 hours for all doses tested (20mg to 120mg).
Anti-secretory Activity: Under maximal acid stimulatory conditions using pentagastrin, a dose-dependent decrease in gastric acid output occurs after a single dose of oral (20-80mg) or a single dose of intravenous (20-120mg) Pantoprazole in healthy volunteers. Pantoprazole given once daily results in increasing inhibition of gastric acid secretion. Following the initial oral dose of 40mg Pantoprazole, a 51% mean inhibition was achieved by 2.5 hours. With once-a-day dosing for 7 days, the mean inhibition was increased to 85%. Pantoprazole suppressed acid secretion in excess of 95% in half of the subjects. Acid secretion had returned to normal within a week after the last dose of Pantoprazole; there was no evidence of rebound hypersecretion.
Pharmacokinetics: Pantoprazole does not accumulate, and its pharmacokinetics are unaltered with multiple daily dosing. Following oral or intravenous administration, the serum concentration of Pantoprazole declines bi-exponentially, with a terminal elimination half-life of approximately one hour. In extensive metabolizers with normal liver function receiving an oral dose of the enteric coated 40mg Pantoprazole tablet, the peak concentration (C_{max}) is 2.5g/ml; the time to reach the peak concentration (t_{max}) is 2.5 h, and the mean total area under the plasma concentration versus time curve (AUC) is 4.8μg•h/ml (range 1.4 to 13.3μg•h/ml)
Absorption: After administration of a single or multiple oral 40mg doses of Pantoprazole Tablets, the peak plasma concentration of Pantoprazole was achieved in approximately 2.5 hours, and C_{max} was 2.5μg/ml. Pantoprazole undergoes little first-pass metabolism, resulting in an absolute bioavailability of approximately 77%. Pantoprazole absorption is not affected by concomitant administration of antacids.
Distribution: The apparent volume of distribution of Pantoprazole is approximately 11.0-23.6L, distributing mainly in extracellular fluid. The serum protein binding of Pantoprazole is about 98%, primarily to albumin.
Metabolism: Pantoprazole is extensively metabolized in the liver through the cytochrome P450 (CYP) system. Pantoprazole metabolism is independent of the route of administration (intravenous or oral).
Elimination: After a single oral or intravenous dose of Pantoprazole to healthy, normal metabolizer volunteers, approximately 71% of the dose was excreted in the urine, with 18% excreted in the feces through biliary excretion. There was no renal excretion of unchanged Pantoprazole.
Geriatric: Only slight to moderate increases in Pantoprazole were found in 64 to 76 years of age volunteers after repeated oral administration, compared with younger subjects.

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No dosage adjustment is recommended based on age.
Paedriatic: The pharmacokinetics of Pantoprazole Tablets were evaluated in children ages 6 to 16 years with a clinical diagnosis of GERD. The PK parameters following a single oral dose of 20mg or 40mg in children ages 6 to 16 years were highly variable (%CV ranges 40 to 80%). The geometric mean AUC estimated from population PK analysis after a 40mg Pantoprazole tablet in pediatric patients was about 39% and 10% higher respectively in 6 to 11 and 12 to 16 year old children, compared to that of adults.
Hepatic impairment: No dosage adjustment is needed in patients with mild to severe hepatic impairment. Doses higher than 40mg/day have not been studied in hepatically impaired patients.
Renal impairment: No dosage adjustment is necessary in patients with renal impairment or in patients undergoing hemodialysis.

CONTRA-INDICATIONS: Hypersensitivity to the active substance, substituted benzimidazoles, or to any of the excipients.

PRECAUTIONS:
USE IN SPECIFIC POPULATIONS: Pediatric Use: The safety and effectiveness of Pantoprazole for short-term treatment (up to eight weeks) of erosive esophagitis (EE) associated with GERD have been established in pediatric patients 1 year to 16 years of age. Effectiveness for EE has not been demonstrated in patients less than 1 year of age.
Geriatric Use: In short-term clinical trials, erosive esophagitis healing rates in 65 years old treated with Pantoprazole were similar to those found in patients under the age of 65.
Gender: Erosive esophagitis healing rates in the 221 women treated with Pantoprazole Tablets in US clinical trials were similar to those found in men. In the 122 women treated long-term with Pantoprazole 40mg or 20mg, healing was maintained at a rate similar to that in men. The incidence rates of adverse reactions were also similar for men and women.
Patients with Hepatic Impairment: Doses higher than 40mg/day have not been studied in patients with hepatic impairment.
Pregnancy: Category "B": Teratogenic effects are reported.
Lactation: Pantoprazole excretion in human milk has been detected in a study of a single nursing mother after a single 40mg oral dose, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the benefit of the drug to the mother.

DRUG INTERACTIONS:
Interference with Antiretroviral Therapy: Concomitant use of atazanavir or nelfinavir with proton pump inhibitors is not recommended. Co-administration of atazanavir or nelfinavir with proton pump inhibitors is expected to substantially decrease atazanavir or nelfinavir plasma concentrations and may result in a loss of therapeutic effect and development of drug resistance.
Coumarin Anticoagulants: There have been post marketing reports of increased INR and prothrombin time in patients receiving proton pump inhibitors, including Pantoprazole, and warfarin concomitantly. Increases in INR and prothrombin time may lead to abnormal bleeding and even death. Patients treated with proton pump inhibitors and warfarin concomitantly should be monitored for increases in INR and prothrombin time.
Clopidogrel: Concomitant administration of Pantoprazole and clopidogrel in healthy subjects had no clinically important effect on exposure to the active metabolite of clopidogrel or clopidogrel induced platelet inhibition. No dose adjustment of clopidogrel is necessary when administered with an approved dose of Pantoprazole.
Drugs for Which Gastric pH Can Affect Bioavailability: Pantoprazole causes long-lasting inhibition of gastric acid secretion. Therefore, Pantoprazole may interfere with absorption of drugs where gastric pH is an important determinant of their bioavailability (e.g., ketoconazole, ampicillin esters, and iron salts).
False Positive Urine Tests for THC: There have been reports of false positive urine screening tests for tetrahydrocannabinol (THC) in patients receiving proton pump inhibitors. An alternative confirmatory method should be considered to verify positive results.
Methotrexate: Case reports, published population pharmacokinetic studies, and retrospective analyses suggest that concomitant administration of PPIs and methotrexate may elevate and prolong serum levels of methotrexate and/or its metabolite hydroxyl methotrexate. However, no formal drug interaction studies of methotrexate with PPIs have been conducted

ADVERSE REACTIONS: The most frequently occurring adverse reactions that were reported with a frequency of 2% are listed below by body system.
Body as a Whole: allergic reaction, pyrexia, photosensitivity reaction, facial edema.
Gastrointestinal: constipation, dry mouth, hepatitis.
Hematologic: leukopenia, thrombocytopenia.
Metabolic/Nutritional: elevated CK (creatine kinase), generalized edema, elevated triglycerides, liver enzymes elevated.
Musculoskeletal: myalgia.
Nervous: depression, vertigo.
Skin and Appendages: urticaria, rash, pruritus.
Special Senses: blurred vision.

INSTRUCTIONS: Store below 30° C. Protect from heat, light and moisture. Keep out of the reach of children.

PRESENTATION:
Lesprot 20mg tablets are available in blister pack of 14 Tablets.
Lesprot 40mg tablets are available in blister pack of 14 Tablets.

ہدایات: ۳۰ ڈگری سینٹی گریڈ سے کم درجہ حرارت پر رکھیں۔ گرمی، روشنی اور نمی سے بچائیں۔ بچوں کی پہنچ سے دور رکھیں۔

PHARMA
Manufactured by:
NABIQASIM INDUSTRIES (PVT.) LTD.
17/24, Korangi Industrial Area, Karachi-Pakistan.
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