Bosch

For Medical Professional only

Qpro® Capsules
(Lansoprazole)

کیوپرو کیپسولز
(لینسوپرازول)

DESCRIPTION:
Lansoprazole is a substituted benzimidazole, 2- [[[3-methyl-4-(2,2,2-trifluoro-ethoxy)-2-pyridyl] methyl] sulfinyl] benzimidazole, a compound that inhibits gastric acid secretion. Its empirical formula is $C_{16}H_{14}F_3N_3O_2S$ with a molecular weight of 369.37.

COMPOSITION:
Qpro 15mg Capsules
Each capsule contains:
Lansoprazole U.S.P. 15mg
(As enteric coated pellets)
(Product Specs.: U.S.P.)

Qpro 30mg Capsules
Each capsule contains:
Lansoprazole U.S.P. 30mg
(As enteric coated pellets)
(Product Specs.: U.S.P.)

CLINICAL PHARMACOLOGY:
Pharmacodynamic Properties:
Pharmacotherapeutic group: Proton pump inhibitors, ATC code: A02BC03

Mechanism of Action:
Lansoprazole belongs to a class of antisecretory compounds, the substituted benzimidazoles, that suppress gastric acid secretion by specific inhibition of the (H+, K+)-ATPase enzyme system at the secretory surface of the gastric parietal cell. Because this enzyme system is regarded as the acid (proton) pump within the parietal cell, lansoprazole has been characterized as a gastric acid-pump inhibitor, in that it blocks the final step of acid production. This effect is dose-related and leads to inhibition of both basal and stimulated gastric acid secretion irrespective of the stimulus. Lansoprazole does not exhibit anticholinergic or histamine type-2 antagonist activity.

Pharmacokinetic Properties
Lansoprazole is a racemate of two active enantiomers that are biotransformed into the active form in the acidic environment of the parietal cells. As lansoprazole is rapidly inactivated by gastric acid, it is administered orally in enteric-coated form(s) for systemic absorption.

Absorption & Distribution:
Lansoprazole exhibits high (80-90%) bioavailability with a single dose. Peak plasma levels occur within 1.5 to 2.0 hours. Intake of food slows the absorption rate of lansoprazole and reduces the bioavailability by about 50%. The plasma protein binding is 97%.

Biotransformation and elimination:
Lansoprazole is extensively metabolised by the liver and the metabolites are excreted by both the renal and biliary route. The metabolism of lansoprazole is mainly catalysed by the enzyme CYP2C19. The enzyme CYP3A4 also contributes to the metabolism. The plasma elimination half-life ranges from 1 to 2 hours following single or multiple doses in healthy subjects. There is no evidence of accumulation following multiple doses in healthy subjects. Sulphone, sulphide and 5-hydroxyl derivatives of lansoprazole have been identified in plasma. These metabolites have very little or no antisecretory activity.

SPECIFIC POPULATIONS
Hepatic Insufficiency:
The exposure of lansoprazole is doubled in patients with mild hepatic impairment and much more increased in patients with moderate and severe hepatic impairment.

Pediatrics:
The evaluation of the pharmacokinetics in children aged 1 –17 years of age showed a similar exposure as compared to adults with doses of 15 mg for those below 30 kg of weight and 30 mg for those above. Higher exposure to lansoprazole in comparison to adults has been seen in infants below the age of 2-3 months with doses of both 1.0 mg/kg and 0.5 mg/kg body weight given as a single dose.

Elderly:
The clearance of lansoprazole is decreased in the elderly, with elimination half-life increased approximately 50% to 100%. Peak plasma levels were not increased in the elderly.

THERAPEUTIC INDICATIONS:
- Treatment of duodenal and gastric ulcer
- Treatment of reflux oesophagitis
- Prophylaxis of reflux oesophagitis
- Eradication of Helicobacter pylori (H. pylori) concurrently given with

appropriate antibiotic therapy for treatment of H.pylori-associated ulcers
- Treatment of NSAID-associated benign gastric and duodenal ulcers in patients requiring continued NSAID treatment
- Prophylaxis of NSAID-associated gastric ulcers and duodenal ulcers in patients at risk requiring continued therapy
- Symptomatic gastroesophageal reflux disease
- Zollinger-Ellison syndrome.

DOSAGE AND ADMINISTRATION:

Treatment of duodenal ulcer

The recommended dose is 30 mg once daily for 2 weeks. In patients not fully healed within this time, the medication is continued at the same dose for another two weeks.

Treatment of gastric ulcer

The recommended dose is 30 mg once daily for 4 weeks. The ulcer usually heals within 4 weeks, but in patients not fully healed within this time, the medication may be continued at the same dose for another 4 weeks.

Reflux oesophagitis

The recommended dose is 30 mg once daily for 4 weeks. In patients not fully healed within this time, the treatment may be continued at the same dose for another 4 weeks.

Prophylaxis of reflux oesophagitis

15 mg once daily. The dose may be increased up to 30 mg daily as necessary.

Eradication of Helicobacter pylori

When selecting appropriate combination therapy consideration should be given to official local guidance regarding bacterial resistance, duration of treatment, (most commonly 7 days but sometimes up to 14 days), and appropriate use of antibacterial agents.

The recommended dose is 30 mg lansoprazole twice daily for 7 days in combination with one of the following:
- Clarithromycin 250-500 mg twice daily + amoxicillin 1 g twice daily
- Clarithromycin 250 mg twice daily + metronidazole 400-500 mg twice daily

H. pylori eradication rates of up to 90%, are obtained when clarithromycin is combined with lansoprazole and amoxicillin or metronidazole.

Six months after successful eradication treatment, the risk of re-infection is low and relapse is therefore unlikely.

Use of a regimen including lansoprazole 30 mg twice daily, amoxicillin 1 g twice daily and metronidazole 400-500 mg twice daily has also been examined. Lower eradication rates were seen using this combination than in regimens involving clarithromycin. It may be suitable for those who are unable to take clarithromycin as part of an eradication therapy, when local resistance rates to metronidazole are low.

NSAID

Treatment of NSAID associated benign gastric and duodenal ulcers in patients requiring continued NSAID treatment:

30 mg once daily for four weeks. In patients not fully healed the treatment may be continued for another four weeks. For patients at risk or with ulcers that are difficult to heal, a longer course of treatment and/or a higher dose should probably be used.

Prophylaxis of NSAID associated gastric and duodenal ulcers in patients at risk (such as age > 65 or history of gastric or duodenal ulcer) requiring prolonged NSAID treatment:

15 mg once daily. If the treatment fails the dose 30 mg once daily should be used.

Symptomatic gastro-oesophageal reflux disease

The recommended dose is 15 mg or 30 mg daily. Relief of symptoms is obtained rapidly. Individual adjustment of dosage should be considered. If the symptoms are not relieved within 4 weeks with a daily dose of 30 mg, further examinations are recommended.

Zollinger-Ellison syndrome

The recommended initial dose is 60 mg once daily. The dose should be individually adjusted and the treatment should be continued for as long as necessary. Daily doses of up to 180 mg have been used. If the required daily dose exceeds 120 mg, it should be given in two divided doses.

Renal impairment

There is no need for a dose adjustment in patients with impaired renal function.

Hepatic impairment

Patients with moderate or severe liver disease should be kept under regular supervision and a 50% reduction of the daily dose is recommended

Elderly

Due to reduced clearance of lansoprazole in the elderly an adjustment of dose may be necessary based on individual requirements. A daily dose of 30 mg should not be exceeded in the elderly unless there are compelling clinical indications.

Paediatric population

The use of lansoprazole is not recommended in children as clinical data are limited and juvenile animal studies have findings of currently unknown human relevance. Treatment of small children below one year of age should be avoided as available data have not shown beneficial effects in the treatment of gastro-oesophageal reflux disease.

Method of Administration:

For optimal effect, lansoprazole capsules should be taken once daily in the morning, except when used for H. pylori eradication when treatment should be twice a day, once in the morning and once in the evening.

Lansoprazole should be taken at least 30 minutes before food. Capsules should be swallowed whole with liquid.

For patients with difficulty swallowing; studies and clinical practice suggest that the capsules may be opened and the granules mixed with a small amount of water, apple/tomato juice or sprinkled onto a small amount of soft food (e.g. yoghurt, apple puree) to ease administration. Capsules may also be opened and granules mixed with 40 ml of apple juice for administration through a nasogastric tube. After preparing the suspension or mixture, the medicinal product should be administered immediately.

CONTRAINDICATIONS:

Hypersensitivity to the active substance or to any of the excipients

WARNINGS AND PRECAUTIONS:

In common with other anti-ulcer therapies, the possibility of malignant gastric tumour should be excluded when treating a gastric ulcer with lansoprazole because lansoprazole can mask the symptoms and delay the diagnosis.

Lansoprazole, like all proton pump inhibitors (PPIs), might increase the counts of bacteria normally present in the gastrointestinal tract. This may increase the risk of gastrointestinal infections caused by bacterias.

Co-administration of lansoprazole is not recommended with HIV protease

inhibitors for which absorption is dependent on acidic intragastric pH, such as atazanavir and nelfinavir, due to significant reduction in their bioavailability. If co-administration of lansoprazole with HIV protease inhibitors is unavoidable, close clinical monitoring is recommended.
Severe hypomagnesaemia has been reported in patients treated with PPIs like lansoprazole for at least three months, and in most cases for a year. Serious manifestations of hypomagnesaemia such as fatigue, tetany, delirium, convulsions, dizziness and ventricular arrhythmia can occur but they may begin insidiously and be overlooked. In most affected patients, hypomagnesaemia improved after magnesium replacement and discontinuation of the PPI. For patients expected to be on prolonged treatment or who take PPIs with digoxin or medicinal products that may cause hypomagnesaemia (e.g., diuretics), health care professionals should consider measuring magnesium levels before starting PPI treatment and periodically during treatment.
Increased Chromogranin A (CgA) level may interfere with investigations for neuroendocrine tumours. To avoid this interference, Lansoprazole capsules treatment should be stopped for at least 5 days before CgA measurements. If CgA and gastrin levels have not returned to reference range after initial measurement, measurements should be repeated 14 days after cessation of proton pump inhibitor treatment.

Daily treatment with any acid-suppressing medications over a prolonged period of time (several years) may lead to malabsorption of cyanocobalamin (vitamin B12) caused by hypo- or achlorhydria. Cyanocobalamin deficiency should be considered in patients with Zollinger-Ellison syndrome and other pathological hypersecretory conditions requiring long-term treatment, individuals with reduced body stores or risk factors for reduced vitamin B12 absorption (such as the elderly) on long-term therapy or if relevant clinical symptoms are observed. Lansoprazole should be used with caution in patients with moderate and severe hepatic dysfunction.

In patients suffering from gastro-duodenal ulcers, the possibility of H. pylori infection as an etiological factor should be considered.

If lansoprazole is used in combination with antibiotics for eradication therapy of H.pylori, then the instructions for the use of these antibiotics should also be followed.

Very rarely cases of colitis have been reported in patients taking lansoprazole. Therefore, in the case of severe and/or persistent diarrhoea, discontinuation of therapy should be considered.

With the exception of patients treated for the eradication of H. pylori infection, if diarrhoea persists, administration of lansoprazole should be discontinued, due to the possibility of microscopic colitis with thickening of the collagen bundle or infiltration of inflammatory cells noted in the large intestine submucosa. In majority of cases, symptoms of microscopic colitis resolve on discontinuation of lansoprazole.

The treatment for the prevention of peptic ulceration of patients in need of continuous NSAID treatment should be restricted to high risk patients.

Proton pump inhibitors, especially if used in high doses and over long durations (>1 year), may modestly increase the risk of hip, wrist and spine fracture, predominantly in the elderly or in the presence of other recognised risk factors. Proton pump inhibitors are associated with very infrequent cases of SCLE. If lesions occur, especially in sun-exposed areas of the skin, and if accompanied by arthralgia, the patient should seek medical help promptly and the health care professional should consider stopping Lansoprazole capsules. SCLE after previous treatment with a proton pump inhibitor may increase the risk of SCLE with other proton pump inhibitors

Sucrose
Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.

DRUG INTERACTIONS:
Lansoprazole may interfere with the absorption of other medicinal products where gastric pH is an important determinant of oral bioavailability.

HIV protease inhibitors
Co-administration of lansoprazole is not recommended with HIV protease inhibitors for which absorption is dependent on acidic intragastric pH, such as atazanavir and nelfinavir, due to significant reduction in their bioavailability.

Ketoconazole and itraconazole
The absorption of ketoconazole and itraconazole from the gastrointestinal tract is enhanced by the presence of gastric acid. Administration of lansoprazole may result in sub-therapeutic concentrations of ketoconazole and itraconazole and the combination should be avoided.

Digoxin
Co-administration of lansoprazole and digoxin may lead to increased digoxin plasma levels. The plasma levels of digoxin should therefore be monitored and the dose of digoxin adjusted if necessary when initiating and ending lansoprazole treatment.
Lansoprazole may increase plasma concentrations of medicinal products that are metabolised by CYP3A4. Caution is advised when combining lansoprazole with medicinal products which are metabolised by this enzyme and have a narrow therapeutic window.

Warfarin
There have been reports of increased INR and prothrombin time in patients receiving PPIs and warfarin concomitantly. Increases in INR and prothrombin time may lead to abnormal bleeding and even death. Patients treated with lansoprazole and warfarin concomitantly may need to be monitored for increase in INR and prothrombin time.

Theophylline
Lansoprazole reduces the plasma concentration of theophylline, which may decrease the expected clinical effect at the dose. Patient monitoring should be taken in co-administration of lansoprazole with theophylline.

Tacrolimus
Co-administration of lansoprazole increases the plasma concentrations of tacrolimus (a CYP3A and P-gp substrate). Lansoprazole exposure increased the mean exposure of tacrolimus by up to 81%. Monitoring of tacrolimus plasma concentrations is advised when concomitant treatment with lansoprazole is initiated or ended.

P-glycoprotein
Lansoprazole has been observed to inhibit the transport protein, P-glycoprotein (P-gp) in vitro. The clinical relevance of this is unknown.

Fluvoxamine
A dose reduction may be considered when combining lansoprazole with the CYP2C19 inhibitor fluvoxamine. The plasma concentrations of lansoprazole increase up to 4-fold.

CYP2C19 and CYP3A4
Enzyme inducers affecting CYP2C19 and CYP3A4 such as rifampicin, and St John´s wort (Hypericum perforatum) can markedly reduce the plasma concentrations of lansoprazole.

Methotrexate
Concomitant use with high-dose methotrexate may elevate and prolong serum levels of methotrexate and/or its metabolite, possibly leading to methotrexate toxicities.

Sucralfate/Antacids
Sucralfate/Antacids may decrease the bioavailability of lansoprazole. Therefore lansoprazole should be taken at least 1 hour after taking these medicinal products.

Non-steroidal anti-inflammatory medicinal products
No clinically significant interactions of lansoprazole with non-steroidal anti-inflammatory medicinal products have been demonstrated, although no formal interactions studies have been performed.

ADVERSE EFFECTS:
Common:
headache, dizziness, vomiting, nausea, diarrhoea, stomach ache, constipation, flatulence, dry mouth or throat, fundic gland polyps (benign), increase in liver enzyme levels, urticaria, itching, rash, fatigue

Uncommon:
leucopenia, thrombocyto-penia, eosinophilia, depression, fracture of the hip, wrist or spine, arthralgia, myalgia, oedema

Rare:
Anaemia, hallucination, insomnia, confusion, paraesthesia, vertigo, restlessness, somnolence, tremor, visual disturbances, pancreatitis, candidiasis of the oesophagus, glossitis, taste disturbances, hepatitis, jaundice, petechiae, purpura, erythema multiforme, photosensitivity, hair loss, interstitial nephritis, gynaecomastia, angioedema, fever, hyperhidrosis, anorexia, impotence

Very Rare:
pancytopenia, agranulocytosis, anaphylactic shock, colitis, stomatitis, Stevens-Johnson syndrome, toxic epidermal necrolysis, increase in cholesterol and triglyceride levels, hyponatremia

Not Known:
Hypomagnesaemia, visual hallucinations, subacute cutaneous lupus erythematosus

USE IN PREGNANCY AND LACTATION:
Pregnancy:
The use of lansoprazole during pregnancy is not recommended.

Lactation:
It is not known whether lansoprazole is excreted in human breast milk. A decision on whether to continue/discontinue breast-feeding or to continue/discontinue therapy with lansoprazole should be made taking into account the benefit of breastfeeding for the child and the benefit of lansoprazole therapy for the woman.

OVERDOSE:
The effects of overdose on lansoprazole in humans are not known. In the case of suspected overdose the patient should be monitored. Lansoprazole is not significantly eliminated by haemodialysis. If necessary, gastric emptying, charcoal and symptomatic therapy is recommended.

SHELF LIFE: 03 years

INSTRUCTIONS:
Protect from heat, sunlight & moisture, store below 25°C.
Keep out of the reach of children.
The expiration date refer to the product correctly stored at the required condition.
Patients and healthcare professionals can also report suspected adverse drug reaction at ade@bosch-pharma.com.
To be sold on prescription of a registered medical practitioner only.

PRESENTATION:
Qpro 15mg: Each pack contains 2x7's capsules in Alu Alu Blister Packing.
Qpro 30mg: Each pack contains 2x7's capsules in Alu Alu Blister Packing.

ہدایات:
دھوپ، گرمی اور نمی سے محفوظ ۲۵ ڈگری سینٹی گریڈ سے کم درجہ حرارت پر رکھیں۔
بچوں کی پہنچ سے دُور رکھیں۔
صرف مستند ڈاکٹر کے نسخے پر فروخت کے لئے۔

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