

LANCAP

SCHEDULING STATUS [5]

1. NAME OF THE MEDICINE
LANCAP 15 mg capsules
LANCAP 15 mg capsules

2. QUALITATIVE AND QUANTITATIVE COMPOSITION
LANCAP 15 mg: each capsule contains lansoprazole 15 mg.
LANCAP 30 mg: each capsule contains lansoprazole 30 mg.
LANCAP contains sugar (sucrose) in the following quantities:
LANCAP 15 mg (16.55 mg and sugar spheres 70.0 mg)
LANCAP 30 mg (33.10 mg and sugar spheres 140.0 mg)
For full list of excipients, see section 6.1

3. PHARMACEUTICAL FORM

Capsules.
LANCAP 15 mg: capsules filled with white to light brown or slightly pink coloured pellets.
LANCAP 30 mg: capsules filled with white to light brown or slightly pink coloured pellets. The body and cap of the hard gelatine capsule is white.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

• LANCAP may be indicated for the short-term treatment of gastric and duodenal ulcers and reflux oesophagitis.
• LANCAP is indicated for Helicobacter pylori-positive duodenal ulcers in conjunction with appropriate antibiotics as part of an eradication programme.

4.2 Preology and method of administration

Prophylactic Gastric ulcer:
30 mg once a day for up to eight weeks.

Duodenal ulcer:
30 mg once a day for up to four weeks.
LANCAP is indicated for Helicobacter pylori positive ulcers, as part of an eradication program with appropriate antibiotics.

Oesophagitis due to gastro-oesophageal reflux:
30 mg once a day for four weeks.
Depending on the endoscopic results, a repeat course of 4 weeks may be necessary.

Maintenance treatment for the prevention of gastro-oesophageal reflux:
15 mg once a day for a maximum period of six years.

Functional dyspepsia:
15 mg - 30 mg once a day for 2 - 4 weeks.

Special populations
Elderly: no dose adjustment is necessary. However, 30 mg per day is the maximum daily dose.

Renal impairment: no dose adjustment is necessary in renal failure - this also applies to patients on dialysis.

Paediatric population
Safety and efficacy in children has not yet been established.

Method of administration
LANCAP should preferably be taken before a meal.

Missed dose:
Medical practitioners should advise patients who forgot to take LANCAP to take a dose as soon as possible and then continue with the normal dose. Patients should not take a double dose to compensate for the missed dose.

4.3 Contraindications

LANCAP is contraindicated in:
• hypersensitivity to lansoprazole or to any of the ingredients of LANCAP;
• pregnancy and lactation (see section 4.6);
• severe liver impairment.
• LANCAP is contraindicated with abacavir or nefazodone, as it substantially reduces exposure to the human immunodeficiency virus (HIV) protease inhibitor (see section 4.5).

4.4 Special warnings and precautions for use
Diagnosis of reflux oesophagitis:
Diagnosis of reflux oesophagitis should be confirmed by endoscopy.

Exclusion of malignant ulcers:
Treatment with LANCAP may alleviate the symptoms of malignant ulcers and can delay diagnosis. Therefore, in patients with a suspected diagnosis of malignant ulcer, unintentional weight loss, recurrent vomiting, dysphagia, haematemesis, or melana, and when gastric ulcer is suspected, the diagnosis should be confirmed by endoscopy. Gastric ulcer or a malignant disease of the oesophagus should be excluded prior to treatment with LANCAP.

Effect of prolonged use:
Daily treatment with acid-suppressing medicines such as LANCAP over a long period of time (i.e. longer than 1 year) may lead to malabsorption of vitamin B12, iron, calcium and folic acid, or of achlorhydria. Rare reports of cytochrome P450-mediated deficiency occurring with acid-suppressing therapy have been reported. This diagnosis should be considered if clinical symptoms consistent with cytochrome P450 deficiency are observed.

Proton pump inhibitors such as LANCAP have also been reported to impair the bioavailability of dietary vitamin C. Fat malabsorption, secondary to increased duodenal pH, has been reported in patients with severe liver impairment. This has also been reported with proton pump inhibitors such as LANCAP, which may cause calcium malabsorption (see section 4.6).

Subacute cutaneous lupus erythematosus (SCL):
Proton pump inhibitors such as LANCAP are associated with very infrequent cases of SCL. 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 healthcare professional should consider stopping LANCAP. SCL after previous treatment with a proton pump inhibitor such as LANCAP may increase the risk of SCL with other proton pump inhibitors.

Increased risk of Clostridium difficile associated diarrhoea:
LANCAP is associated with an increased risk of Clostridium difficile associated diarrhea (CDAD). A diagnosis of CDAD should be considered for patients taking LANCAP who develop diarrhoea that does not stop. Patients should use the lowest dose and shortest duration of LANCAP therapy necessary to the condition being treated.

Bone fracture:
LANCAP therapy may be associated with an increased risk for osteoporosis-related fractures of the hip, wrist or spine. The risk of fracture was increased in patients who received high-dose, defined as multiple daily doses, and long-term therapy (3 years or longer) mainly in the elderly or in the presence of other recognized risk factors. Patients should use the lowest dose and shortest duration of LANCAP therapy appropriate to the condition being treated. Patients at risk for osteoporosis-related fractures should be managed according to established treatment guidelines and should receive appropriate care (see section 4.8).

Occurrence of hypomagnesaemia

Severe hypomagnesaemia has been reported in patients treated with LANCAP for at least 3 months to one year. Hypomagnesaemia also produces impaired cytochrome P450-mediated metabolism which may lead to hypocalcaemia. Most patients had concomitant hypocalcaemia and normal parathyroid hormone levels, therefore it confirms hypomagnesaemia as the primary defect. Severe manifestations of hypomagnesaemia such as fatigue, tetany, delirium, convulsions, dizziness and arrhythmic dysrhythmias can occur. In some patients, hypomagnesaemia was treated with LANCAP with other drugs or medicines which may cause hypomagnesaemia (e.g. diuretics). Healthcare professionals should consider measuring magnesium levels before starting and during treatment with LANCAP (see section 4.5). LANCAP decreases gastric acid secretion by targeting hydrogen (H⁺)-potassium (K⁺) adenosine triphosphatase (ATPase) in acidic conditions. Hypokalaemia is not generally introduced by LANCAP alone, but in extreme alkalosis or an impaired K⁺-recovery system, LANCAP may cause hypokalaemia unrelated to hypomagnesaemia.

Concomitant use with methotrexate:
Concomitant use of LANCAP with methotrexate (primarily at high doses) may elevate and prolong serum levels of methotrexate and/or its metabolite, possibly leading to methotrexate toxicity. In high-dose methotrexate administration, a temporary withdrawal of LANCAP may be considered in some patients (see section 4.5).

Effects related to acid inhibition:
During long-term treatment, gastric glandular cysts have been reported in increased frequency. These physiological changes result from pronounced inhibition of gastric acid secretion.

Decreased gastric acidity increases gastric counts of bacteria normally present in the gastrointestinal tract. Treatment with LANCAP may lead to an increased risk of gastrointestinal infections such as Salmonella, and Campylobacter, Shigella or Clostridium difficile.

Helicobacter pylori (H. pylori):
In patients suffering from gastroduodenal ulcers, the possibility of H. pylori infection is an essential factor should be considered.

Effect on central nervous system:
LANCAP may lead to drowsiness and impaired concentration which may be aggravated by the simultaneous intake of alcohol or other central nervous system depressants.

Possible porphyrythropoiesis:
Lansoprazole, as LANCAP, is possibly porphyryrogenic and should be used only when no safer alternative is available, and precautions should be considered in all patients.

Acute interstitial nephritis:
Acute interstitial nephritis has been observed in patients taking proton pump inhibitors (PPIs) including LANCAP. Patients may present with varying signs and symptoms, from asymptomatic hypokalaemia to renal-specific manifestations of decreased renal function (e.g. raised creatinine, azotaemia). In reported case series, some patients were diagnosed on biopsy and in the absence of extra-renal manifestations (e.g. fever, rash or arthralgia). Interstitial nephritis may lead to renal failure. Discontinue LANCAP if acute interstitial nephritis develops (see section 4.8).

Long term use:
Because of limited safety data for patients on maintenance treatment for longer than 1 year, regular review of the treatment should be regularly performed in these patients.

Cautions:
Cautions has occurred in patients taking lansoprazole as contained in LANCAP. Therefore, in the case of severe and/or persistent diarrhoea, discontinuation of lansoprazole should be considered.

Interference with laboratory tests:
Increased Chromogranin A (CgA) levels may interfere with investigations for neuroendocrine tumours. To avoid this interference, LANCAP treatment should be stopped for at least 5 days before CgA measurements (see section 5.1). 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.

Effect on the endocrine of LANCAP:
Patients with no laboratory problems such as glucose intolerance, glucose-glucose malabsorption or sucrose-sucrose insufficiency should not take LANCAP. LANCAP contains less than 1 mmol (0.025g) sodium per capsule, that is to say essentially "sodium free".

Paediatric population
Safety and efficacy in children:
Safety and efficacy in children has not yet been established.

4.5 Interaction with other medicines and other types of interaction
Effects of LANCAP on other medicines
Medicines with pH dependent absorption:
LANCAP causes a reduction in the gastric inhibition of gastric acid secretion, therefore it is possible that LANCAP may interfere with the absorption of medicines whose gastric pH is an important determinant. In reported case series, some patients were diagnosed on biopsy and in the absence of extra-renal manifestations (e.g. fever, rash or arthralgia). Interstitial nephritis may lead to renal failure. Discontinue LANCAP if acute interstitial nephritis develops (see section 4.8).

HIV protease inhibitors:
Since LANCAP has been shown that co-administration of atazanavir with proton pump inhibitors such as LANCAP results in a substantial reduction in the bioavailability of atazanavir. Therefore, LANCAP should not be co-administered with atazanavir and nelfinavir (see section 4.3).

Ketorolac and tramadol:
The absorption of ketorolac and tramadol from the gastrointestinal tract is enhanced by the presence of gastric acid. Administration of lansoprazole, as LANCAP, may result in a substantial reduction in the bioavailability of ketorolac and tramadol and the combination should be avoided.

Methotrexate:
Concomitant administration of methotrexate (particularly in high doses) with LANCAP may elevate and prolong serum concentrations of methotrexate and/or its metabolite hypomethotrexate. However, LANCAP does not affect the pharmacokinetics of methotrexate with PPIs such as LANCAP have been conducted (see section 4.4).

Digoxin:
The absorption of digoxin may be enhanced if taken with LANCAP resulting in increased plasma concentrations. Plasma levels of digoxin should thus be monitored and the dosage adjusted upon initiating and during LANCAP treatment.

Warfarin:
The response to anticoagulants such as warfarin may be affected by any concomitant medicines. It is therefore good practice to monitor the patient with additional PT (prothrombin time)/INR (international normalised ratio) determinations when LANCAP is initiated, discontinued or taken irregularly, since a minor reduction in the concentration of warfarin may be expected.

Medicines metabolised by cytochrome P450 (CYP450) enzymes
LANCAP may increase plasma concentrations of medicines that are metabolised by cytochrome P3A4 (CYP3A4). Caution is advised when combining LANCAP with medicines which are metabolised by this enzyme and have a narrow therapeutic window.

Theophylline:
LANCAP reduces the plasma concentration of theophylline potentially decreasing the expected clinical effect at the required dose. Patients may require additional titration of the theophylline dosage when treatment with LANCAP is commenced or discontinued, to ensure clinically effective blood levels. Caution is thus advised when used in combination.

Tocinolins:
Co-administration of LANCAP may cause an increase in tacrolimus plasma concentrations and result in a decreased clearance. Monitoring of tacrolimus plasma concentrations is advised when concomitant treatment with LANCAP is initiated or ended.

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

Effects of other medicines on LANCAP
Medicines which inhibit CYP2C19:
Fluvoxamine may increase the plasma concentration of lansoprazole, therefore a dose reduction may need to be considered in patients taking these medicines concomitantly.

Medicines which induce CYP2C19 and CYP3A4:
Cytome inducers affecting CYP2C19 and CYP3A4, such as rifampicin and St John's Wort, can reduce the plasma concentrations of lansoprazole.

Other
Succinylcholine/anticholin:
Administration of LANCAP concomitantly with succinylcholine absorption of the proton pump inhibitor and reduces bioavailability by approximately 17 %. Therefore, LANCAP should be taken at least 30 minutes prior to succinylcholine.

The administration of antacids and LANCAP does not interfere with its effect.

Nonsteroidal anti-inflammatory medicines:
No clinically significant interactions of LANCAP with nonsteroidal anti-inflammatory medicines have been demonstrated, although no formal interaction studies have been performed.

Since LANCAP is a weak inducer of the cytochrome P450 system, the possibility exists for interactions with medicines which are metabolized via this system, such as warfarin, valproic acid, nifedipine, digoxin, or other nonsteroidal anti-inflammatory medicines (NSAIDs), oral contraceptives, phenytoin, progesterone, prednisone, diazepam or clonidine.

The decrease in gastric activity with LANCAP may give false positive results in diagnostic investigations for neuroendocrine tumours and treatment should be stopped before such investigations.

Treatment with LANCAP may cause false-negative results in the *in vitro* breath test for Helicobacter pylori infection. It is recommended that a urea breath test should not be performed for at least 2 weeks after stopping treatment with LANCAP.

LANCAP has been shown to have no clinically significant interaction with amoxicillin.

Concomitant administration of LANCAP with clopidogrel in healthy patients has 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 LANCAP.

4.6 Fertility, pregnancy and lactation

Pregnancy:
Adequate and well-controlled studies in humans have not been done (see section 4.3). It is not known whether lansoprazole is distributed into breast milk. However, lansoprazole or its metabolites are distributed into the milk of rats. Lansoprazole has been shown to cause tumourogenic effects in animals.

4.7 Effects on ability to drive and use machines
Caution is advised since LANCAP can influence the ability to drive and use machines (see section 4.8). Patients should be advised, particularly at the initiation of therapy, against taking charge of machinery or performing potentially hazardous tasks where loss of concentration could lead to accidents.

4.8 Undesirable effects

System Organ Class
Blood and lymphatic system disorders

Frequency
Less frequent

Side effects
Thrombocytopenia, anaemia, leucopenia, neutropenia, eosinophilia, agranulocytosis, pancytopenia, myeloma, lymphadenopathy

Immune system disorders
Less frequent

Allergic reaction, bronchospasm, angioedema, anaphylaxis, anaphylactic shock, acute interstitial nephritis

Endocrine disorders
Less frequent

Adiposities, dehydration, gout, hypercalcaemia/hypocalcaemia, peripheral oedema, weight gain/loss

Metabolism and nutrition disorders
Less frequent

Hypomagnesaemia, acute hypomagnesaemia can correlate with hypocalcaemia and may result in hypocalcaemia

Psychiatric disorders
Less frequent

Abnormal dreams, agitation, nausea, vomiting, constipation, depersonalisation, depression, emotional lability, hallucinations, hostility, aggression, libido decreased/increased, nervousness, sleep disorder, dementia, neuritis, insomnia

Nervous system disorders
Frequent

Headache, dizziness, convulsion, diplopia, hemiplegia, hypoesthesia, hyperkinesia, hyperaesthesia, paraesthesia, vertigo, tingling, feeling abnormality, somnolence, paraesthesia, tremor, restlessness

Eye disorders
Less frequent

Abnormal vision, amblyopia, blepharitis, blurred vision, cataract, conjunctivitis, dry eye, eye pain, hyperaemia, retinal detachment, visual field defect, xerophthalmia

Ear and labyrinth disorders
Less frequent

Deafness, ear disorder, otitis media, tinnitus

Cardiac disorders
Less frequent

Atrioes, dysrhythmia, bradycardia, myocardial infarction, palpitations, sinus bradycardia, tachycardia

Vascular disorders
Less frequent

Vasodilation, cerebrovascular accident/stroke, hypertension, hyperlipidemia/hypotension, migraine, stroke

Respiratory, thoracic and mediastinal disorders
Less frequent

Asthma, bronchitis, cough, increased, dyspnoea, epistaxis, gastroenteritis, hiccup, sinusitis, nasopharyngitis, pharyngitis, pleural effusion, pneumonia, respiratory disorder, sinusitis, sinusitis, sinusitis, stridor

Gastrointestinal disorders
Frequent

Diarrhoea, dry mouth or throat, nausea, vomiting, constipation, abdominal pain, flatulence

Less frequent
If you suffer from constipation, you may be at a risk of Helicobacter pylori (H. pylori) infection

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PATIENT INFORMATION LEAFLET

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LANCAP 15 mg (16.55 mg and sugar spheres 70.0 mg)
LANCAP 30 mg (33.10 mg and sugar spheres 140.0 mg)

Read all of this leaflet carefully before you start taking LANCAP
• Keep this leaflet. You may need to read it again.
• If you have further questions, please ask your doctor, pharmacist, nurse or other healthcare provider.
• LANCAP has been prescribed for you personally and you should not share your medicine with other people. It may harm them, even if their symptoms are the same as yours.

What is this leaflet for?

1. What LANCAP is and what it is used for
2. What you need to know before you take LANCAP
3. How to take LANCAP
4. Possible side effects
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