

1. Brand Name and Generic Name

Panorma-D: Pantoprazole Gastro-resistant and Domperidone Prolonged-release Capsules IP

2. Strength of Active Ingredients:

Panorma-D: Each hard gelatin capsule contains Pantoprazole Sodium IP equivalent to Pantoprazole (As Enteric Coated Pellets) 40mg
Domperidone Maleate IP equivalent to Domperidone (As Sustained Release Pellets) 30mg

3. Product Description:

Panorma-D is Pantoprazole and Domperidone capsule, which is a combination of proton pump inhibitor (PPI) with anti-emetic and prokinetic.

4. Pharmacodynamics & Pharmacokinetics

Pharmacodynamics:

Pantoprazole:

Pantoprazole is a proton pump inhibitor (PPI) that suppresses the final step in gastric acid production by covalently binding to the H⁺/K⁺-ATPase 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.

Domperidone:

Domperidone is a dopamine antagonist with anti-emetic properties. Domperidone does not readily cross the bloodbrain barrier. Its anti-emetic effect may be due to a combination of peripheral (gastrokinetic) effects and antagonism of dopamine receptors in the chemoreceptor trigger zone, which lies outside the blood-brain barrier in the area postrema.

Pharmacokinetics:

Absorption:

Pantoprazole: Peak plasma concentration of pantoprazole is achieved in approximately 2.5 hours, and C_{max} is 2.5 µg/mL. Pantoprazole undergoes little first-pass metabolism, resulting in an absolute bioavailability of approximately 77%.

Domperidone: The low absolute bioavailability of oral domperidone (approximately 15%) is due to an extensive first-pass metabolism in the gut wall and liver. Oral bioavailability is decreased by prior concomitant administration of cimetidine and sodium bicarbonate.

Distribution:

Pantoprazole: The serum protein binding of pantoprazole is about 98%, primarily to albumin. Volume of distribution is about 0.15 l/kg.

Domperidone: Domperidone is 91-93% bound to plasma proteins. Distribution studies with radiolabelled drug have shown wide tissue distribution, but low brain concentration. Small amounts of drug cross the placenta.

Metabolism:

Pantoprazole: The substance is almost exclusively metabolized in the liver. The main metabolic pathway is demethylation by CYP2C19 with subsequent sulphate conjugation; other metabolic pathway includes oxidation by CYP3A4.

Domperidone: Domperidone undergoes rapid and extensive hepatic metabolism by hydroxylation and N-dealkylation. CYP3A4 is a major form of cytochrome P-450 involved in the N-dealkylation of domperidone, whereas CYP3A4, CYP1A2 and CYP2E1 are involved in domperidone aromatic hydroxylation.

Elimination:

Pantoprazole: Renal elimination represents the major route of excretion (about 80 %) for the metabolites of pantoprazole, the rest is excreted with the faeces.

Domperidone: Urinary and faecal excretions amount to 31% and 66% of the oral dose respectively.

5. Indications:

Treatment of Gastro-esophageal Reflux Disease.

6. Posology and Method of Administration:

One capsule once daily preferably before meal.

7. Contraindication:

- In patients with a known hypersensitivity to pantoprazole or domperidone or any other inactive ingredients of the capsule.
- Prolactin-releasing pituitary tumour (prolactinoma).
- When stimulation of the gastric motility could be harmful: gastrointestinal haemorrhage, mechanical obstruction or perforation.

8. Special Populations:

Hepatic impairment and renal insufficiency
Precaution for use during pregnancy and lactation.

Pantoprazole: Concurrent gastric malignancy, Atrophic gastritis, Acute interstitial nephritis, Vitamin B12 deficiency, Clostridium difficile associated diarrhea, osteoporosis and bone fracture, hypomagnesemia, tumorigenicity, interference with urine screen for tetrahydrocannabinol (THC). Pantoprazole is not recommended for use in children below 12 years of age because of limited data on safety and efficacy in the age group.

Domperidone: not recommended for use in patients with underlying cardiac disease without medical supervision. Domperidone causes increase in serum prolactin levels resulting in galactorrhoea in females and gynaecomastia in males, and hypertensive crisis in patients with pheochromocytoma. The efficacy of Domperidone in children less than 12 years of age has not been established. The efficacy of Domperidone in adolescents 12 years of age and older and weighing less than 35 kg has not been established.

9. Undesirable Effects:

Pantoprazole: Diarrhoea, dizziness, pruritus, skin rashes, GIT infections; anaphylaxis, angioedema, chest pain, dyspnoea, erythema multiforme, gastroenteritis, hyperglycaemia, infection, Inj. site reaction, jaundice, optic neuropathy, anterior ischaemia, pancreatitis, speech disorder.

Domperidone: Headache, insomnia, nervousness, dizziness, thirst, lethargy, irritability, GI disturbances, hot flushes, mastalgia, galactorrhoea, gynaecomastia, menstrual irregularities, rash, pruritus, urticaria, stomatitis, conjunctivitis, urinary frequency, dysuria, oedema, palpitations, leg cramps, asthenia, drug intolerance.

10. Storage Condition:

Store Panorma-D in cool, dry place protected from light and moisture. Keep away from the reach of children and pets.

11. Dosage forms and Packaging available:

Panorma-D:

Each box contains 10 Capsules x 10 Blisters