

# Glipxen-M

Linagliptin INN & Metformin Hydrochloride BP

## COMPOSITION

**Glipxen-M 500 Tablet:** Each film coated tablet contains Linagliptin INN 2.5 mg & Metformin Hydrochloride BP 500 mg.

**Glipxen-M 850 Tablet:** Each film coated tablet contains Linagliptin INN 2.5 mg & Metformin Hydrochloride BP 850 mg.

## PHARMACOLOGY

**Glipxen-M** is a combination of Linagliptin & Metformin Hydrochloride with complementary mechanism of action to improve glycemic control in patients with type 2 diabetes mellitus.

Linagliptin is an inhibitor of DPP-4 (dipeptidyl peptidase-4), an enzyme that degrades the incretin hormones GLP-1 (glucagon like peptide-1) and GIP (glucose dependent insulinotropic polypeptide). Thus, Linagliptin increases the concentrations of active incretin hormones, stimulating the release of insulin from pancreatic beta ( $\beta$ ) cells in a glucose-dependent manner and decreasing the secretion of glucagon from pancreatic alpha ( $\alpha$ ) cells in the circulation.

Metformin Hydrochloride is a biguanide type oral antihyperglycemic drug used in the management of type 2 diabetes. It lowers both basal and postprandial plasma glucose. Its mechanism of action is different from those of sulfonylureas and it does not occur hypoglycemia. Metformin decreases hepatic glucose production, decreases intestinal absorption of glucose and improves insulin sensitivity by increasing peripheral glucose uptake and utilization.

## INDICATION

**Glipxen-M** is indicated in the treatment of type 2 diabetes mellitus to improve glycaemic control in adults. As combination with Metformin when diet and exercise plus Metformin alone do not provide adequate glycaemic control.

## DOSAGE AND ADMINISTRATION

The dosage of **Glipxen-M** should be individualized on the basis of both effectiveness and tolerability, while not exceeding the maximum recommended dose of 2.5 mg Linagliptin/1000 mg Metformin Hydrochloride twice daily. Glipxen-M should be given twice daily with meals. Dose escalation should be gradual to reduce the gastrointestinal (GI) side effects associated with Metformin use.

### Recommended starting dose:

In patients currently not treated with Metformin, initiate treatment with 2.5 mg Linagliptin/500 mg Metformin Hydrochloride twice daily.

In patients already treated with Metformin, start with 2.5 mg Linagliptin and the current dose of Metformin taken at each of the two daily meals (e.g., a patient on Metformin Hydrochloride 500/850 mg twice daily would be started on 2.5 mg Linagliptin 500/850 mg Metformin Hydrochloride twice daily with meals).

Patients already treated with Linagliptin and Metformin Hydrochloride individual components may be switched to **Glipxen-M** containing the same doses of each component.

## CONTRAINDICATION

Although Linagliptin undergoes minimal renal excretion, Metformin Hydrochloride is known to be substantially excreted by the kidney. The risk of Metformin Hydrochloride accumulation and lactic acidosis increases with the degree of renal impairment. Therefore, this combination is contraindicated in patients with renal impairment. It is also contraindicated in acute or chronic metabolic acidosis (diabetic ketoacidosis) and in hypersensitivity to Linagliptin or Metformin Hydrochloride.

## PRECAUTION

In a patient with lactic acidosis who is taking Metformin Hydrochloride, the drug should be discontinued immediately and supportive therapy promptly

instituted. There have been postmarketing reports of acute pancreatitis. If pancreatitis is suspected, promptly discontinue **Glipxen-M**. Temporarily discontinue **Glipxen-M** in patients undergoing radiologic studies with intravascular administration of iodinated contrast materials or any surgical procedures necessitating restricted intake of food and fluids. Metformin Hydrochloride may lower Vitamin B<sub>12</sub> levels; so hematologic parameters should be monitored annually.

## SIDE EFFECT

Most common side effects are nasopharyngitis and diarrhea. Hypoglycemia is more common in patients treated with this combination and sulfonylureas.

## DRUG INTERACTION

Linagliptin is a weak competitive and a weak to moderate mechanism-based inhibitor of CYP isozyme CYP3A4, but does not inhibit other CYP isozymes.

Co-administration of Frusemide, Nifedipine, Amiloride, Digoxin, Ranitidine, Triamterene, and Trimethoprim with Metformin increase the plasma Metformin concentration. Thus, careful patient monitoring and dose adjustment of Metformin and/or the interfering drug is recommended in patients who are taking such drugs.

## OVERDOSE

In the event of an overdose with Glipxen-M, employ the usual supportive measures (e.g., remove unabsorbed material from the gastrointestinal tract, employ clinical monitoring, and institute supportive treatment) as dictated by the patient's clinical status. Removal of Linagliptin by hemodialysis or peritoneal dialysis is unlikely. However, Metformin is dialyzable with a clearance of up to 170 mL/min under good hemodynamic conditions.

### Linagliptin

During controlled clinical trials in healthy subjects, with single doses of up to 600 mg of Linagliptin (equivalent to 120 times the recommended daily dose), there were no dose-related clinical adverse drug reactions. There is no experience with doses above 600 mg in humans.

### Metformin Hydrochloride

Overdose of Metformin has occurred, including ingestion of amounts greater than 50 grams. Hypoglycemia was reported in approximately 10% of cases, but no causal association with Metformin has been established. Lactic acidosis has been reported in approximately 32% of Metformin overdose cases.

## PREGNANCY AND LACTATION

**Pregnancy:** There are no adequate and well controlled studies in pregnant women. So, **Glipxen-M** tablets should be used during pregnancy only if clearly needed.

**Nursing mothers:** It is not known whether Glipxen-M passes into breast milk or not.

## STORAGE CONDITION

Store below 30°C and dry place, away from light. Keep out of the reach of children.

## COMMERCIAL PACK

**Glipxen-M 500 Tablet:** Each commercial box contains 28 film coated tablets in Alu-Alu blister pack.

**Glipxen-M 850 Tablet:** Each commercial box contains 28 film coated tablets in Alu-Alu blister pack.

Manufactured By  
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