sitaGLIPtin (sit-a-glip-tin)

Januvia

Classification
Therapeutic: antidiabetics
Pharmacologic: enzyme inhibitors

Pregnancy Category B

Indications
Adjunct to diet and exercise in the management of type 2 diabetes mellitus; may be used as monotherapy or combination therapy with metformin, a thiazolidinedione, a sulfonylurea, or insulin.

Action
Inhibits the enzyme dipeptidyl peptidase-4 (DPP-4), which slows the inactivation of incretin hormones, resulting in increased levels of active incretin hormones. These hormones are released by the intestine throughout the day, and are involved in regulation of glucose homeostasis. Increased/prolonged incretin levels result in an increase in insulin release and decrease in glucagon levels.

Therapeutic Effects:
Improved control of blood glucose.

Pharmacokinetics
Absorption: 87% absorbed following oral administration.
Distribution: Unknown.
Metabolism and Excretion: 79% excreted unchanged in urine, minor metabolism.
Half-life: 12.4 hr.

TIME/ACTION PROFILE
ROUTE ONSET PEAK DURATION
PO rapid 1–4 hr 24 hr

Contraindications/Precautions
Contraindicated in: Type 1 diabetes mellitus; Diabetic ketoacidosis; Hypersensitivity.
Use Cautiously in: Renal impairment (dose ↓ required for CrCl < 50 mL/min); History of pancreatitis; History of angioedema to another DPP-4 inhibitor; OB: Use only if clearly needed; Lactation: Excretion into breast milk unknown; Pediat: Safety not established; Geri: Consider age-related ↓ in renal function when determining dose.

Adverse Reactions/Side Effects
CNS: headache.
GI: pancreatitis, nausea, diarrhea.
GU: acute renal failure.
Resp: upper respiratory tract infection, nasopharyngitis.
MS: arthralgia, back pain, muscle pain.
Misc: allergic reactions including anaphylaxis, angioedema, exfoliative skin conditions (steven johnson syndrome), rash, pustules.

Interactions
Drug-Drug: May slightly ↑ serum digoxin levels; monitoring recommended; ↑ risk of hypoglycemia when used with insulin, glyburide, glipizide, or glimepiride (may need ↓ dose of insulin or sulfonylurea).

Route/Dosage
PO (Adults): 100 mg once daily.
Renal Impairment
PO (Adults): CCr 30–50 mL/min — 50 mg once daily; CCr < 30 mL/min — 25 mg once daily.

NURSING IMPLICATIONS
Assessment
● Observe patient for signs and symptoms of hypoglycemic reactions: abdominal pain, sweating, hunger, weakness, dizziness, headache, tremor, tachycardia, anxiety.
● Monitor for signs of pancreatitis (nausea, vomiting, anorexia, persistent severe abdominal pain, sometimes radiating to the back) during therapy. If pancreatitis occurs, discontinue sitagliptin and monitor serum and urine amylase, amylase/creatinine clearance ratio, electrolytes, serum calcium, glucose, and lipase.
● Assess for rash periodically during therapy. May cause Stevens-Johnson syndrome. Discontinue therapy if severe or if accompanied with fever, general malaise, fatigue, muscle or joint aches, blisters, oral lesions, conjunctivitis, hepatitis, and/or eosinophilia.
Lab Test Considerations:
Monitor hemoglobin A1C prior to and periodically during therapy.
Monitor renal function prior to and periodically during therapy.

Potential Nursing Diagnoses
Diabetes mellitus: more than body requirements (Indications)
Noncompliance (Patient/Family Teaching)

Implementation
- Do not confuse sitagliptin with sumatriptan. Do not confuse Januvia (sitagliptin) with Enervit (estrogens, conjugated B), Jantoven (warfarin), or Janumet (sitagliptin/metformin).
- Patients stabilized on a diabetic regimen who are exposed to stress, fever, trauma, infection, or surgery may require administration of insulin.
- PO: May be administered without regard to food.

Patient/Family Teaching
- Instruct patient to take sitagliptin as directed. Take missed doses as soon as remembered, unless it is almost time for next dose; do not double doses. Advise patient to read Medication Guide before starting and with each Rx refill in case of changes.
- Explain to patient that sitagliptin helps control hyperglycemia but does not cure diabetes. Therapy is usually long-term.
- Instruct patient not to share this medication with others, even if they have the same symptoms; it may harm them.
- Encourage patient to follow prescribed diet, medication, and exercise regimen to prevent hypoglycemic or hyperglycemic episodes.
- Teach signs of hypoglycemia and hyperglycemia with patient. If hypoglycemia occurs, advise patient to take a glass of orange juice or 2–3 tsp of sugar, honey, or corn syrup dissolved in water, and notify health care professional.
- Instruct patient in proper testing of blood glucose and urine ketones. These tests should be monitored closely during periods of stress or illness and health care professional notified if significant changes occur.
- Advise patient to stop taking sitagliptin and notify health care professional promptly if symptoms of hypersensitivity reactions (rash, hives, swelling of face, lips, tongue, and throat; difficulty in breathing or swallowing) or pancreatitis occur.
- Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications.
- Advise patient to notify health care professional if pregnancy is planned or suspected or if breast feeding. Encourage patients who become pregnant while taking sitagliptin to join the pregnancy registry by calling 1-800-986-8999.

Evaluation/Desired Outcomes
- Improved hemoglobin A1C, fasting plasma glucose, and 2-hr post-prandial glucose levels.

Why was this drug prescribed for your patient?