1 saxagliptin (sax-a-glip-tin)
Onglyza
Classification
Therapeutic: antidiabetics
Pharmacologic: dipeptidyl peptidase-4 (DPP-4) inhibitors
Pregnancy Category: B

Indications
Adjunct with diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus.

Action
Acts as a competitive inhibitor of dipeptidyl peptidase-4 (DPP4), which slows inactivation of incretin hormones, thereby increasing their concentrations and reducing fasting and postprandial glucose concentrations. Therapeutic Effects: Improved control of blood glucose.

Pharmacokinetics
Absorption: Well absorbed following oral administration.
Distribution: Unknown.
Metabolism and Excretion: Metabolized by the liver via the P450 3A4/5 (CYP3A4/5) enzyme system, with conversion to 5-hydroxysaxagliptin, a pharmacologically active metabolite; 24% of saxagliptin is excreted unchanged in urine, 36% of hydroxysaxagliptin is excreted unchanged in urine, 22% is eliminated in feces as unabsorbed drug/metabolites excreted in bile.
Half-life: Saxagliptin—2.5 hr; 5-hydroxysaxagliptin—3.1 hr.

TIME/ACTION PROFILE (DDP-4 inhibition)

ROUTE ONSET PEAK DURATION
PO unknown 2 hr (4 hr for 5-hydroxysaxagliptin)† 24 hr
† Blood levels
Contraindications/Precautions
Contraindicated in: Type 1 diabetes; Diabetic ketoacidosis; History of hypersensitivity reaction.

Use Cautiously in: Ger: May be more sensitive to effects, consider age-related ↓ in renal function; OB: Use only if clearly needed; Lactation: Use cautiously; Pedi: Safety and effectiveness not established.

Adverse Reactions/Side Effects
CNS: headache.
CV: peripheral edema († with thiazolidinediones); GI: vomiting.
Endo: hypoglycemia († with sulfonylureas);
Misc: anaphylaxis, angioedema, exfoliative skin disorders.

Interactions
Drug-Drug: Strong CYP3A4/5 inhibitors, including: ketoconazole, atazanavir, clarithromycin, indinavir, itraconazole, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin; risk of hypoglycemia with sulfonylureas or insulin; may need to ↓ dose of sulfonylurea or insulin.

Route/Dosage
PO (Adults): 2.5–5 mg once daily; Strong CYP3A4/5 inhibitors—2.5 mg once daily.

Renal Impairment
PO (Adults): CCr 50 mL/min—2.5 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 saxagliptin and monitor serum and urine amylase and lipase. May need to ↓ dose of sulfonylurea or insulin.
• Monitor renal function prior to and periodically during therapy.
• May cause ↓ absolute lymphocyte count.

Patient/Family Teaching
• Inform patient to take as directed. Pill should be swallowed whole; do not crush or chew. May take with or without food.
• Advise patient to consult health care professional prior to taking any new medications.
• May cause hypoglycemia. Take action to prevent hypoglycemia when exercising, consuming alcohol, reduced calorie diets, stress, illness, or surgery. Take steps to prevent injury if hypoglycemic reaction occurs.
• Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications.
• Advise patient to notify health care professional of medication regimen prior to treatment or surgery.

Evaluation/Desired Outcomes
• Improved glycemic control.

Signs and symptoms of pancreatitis: Nausea, vomiting, anorexia, persistent severe abdominal pain, sometimes radiating to the back; may require discontinuation of saxagliptin.

Use discontinued — Discontinued.
Potential Nursing Diagnoses

- Imbalanced nutrition: more than body requirements (Indications)
- Noncompliance (Patient/Family Teaching)

Implementation

- 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. Swallow tablet whole, do not cut or split.

Patient/Family Teaching

- Instruct patient to take saxagliptin as directed. If a dose is missed, take the next dose as prescribed, do not double doses. Advise patient to read the Patient Package Insert before starting and with each Rx refill; new information may be available.
- Explain to patient that saxagliptin 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 or medical conditions.
- Encourage patient to follow prescribed diet, medication, and exercise regimen to prevent hyperglycemia or hypoglycemia episodes.
- Review signs of hyperglycemia and hypoglycemia with patient. Hyperglycemia 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 notify health care professional promptly if swelling of hands, feet, or ankles; rash; hives; or swelling of face, lips, or throat occurs.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications.
- Advise patient to notify health care professional of pregnancy or if breast feeding.

Evaluation/Desired Outcomes

- Improved hemoglobin A1C, fasting plasma glucose and 2-hr post-prandial glucose levels.

Why was this drug prescribed for your patient?