ibandronate (i-ban-dro-nate)

Table

| Classification | Therapeutic: Bone resorption inhibitors |

Pharmacologic: Biphosphonates

Pregnancy Category C

Indications

Treatment or prevention of postmenopausal osteoporosis.

Action

Inhibits resorption of bone by inhibiting osteoclast activity. Therapeutic Effects: Reversal/prevention of progression of osteoporosis with decreased fractures.

Pharmacokinetics

Absorption: 0.6% absorbed following oral administration (significantly by food).

Distribution: Rapidly binds to bone.

Protein Binding: 90.9–99.5%.

Metabolism and Excretion: 50–60% excreted in urine; unabsorbed drug is eliminated in feces.

Half-life: PO—10–60 hr; IV—4.6–25.5 hr.

TIME/ACTION PROFILE

ROUTE ONSET PEAK DURATION
PO unknown 0.5–2 hr up to 1 mo
IV unknown 3 hr up to 3 mo

Contraindications/Precautions

Contraindicated in: Hypersensitivity; Abnormalities of the esophagus which delay esophageal emptying (i.e., strictures, achalasia); Uncorrected hypocalcemia; Inability to stand/sit upright for at least 60 min; CCr 30 mL/min.

Use Cautiously in: History of upper GI disorders; Concurrent use of NSAIDs or aspirin; Invasive dental procedures, cancer, receiving chemotherapy or corticosteroids, bone disease, anemia, coagulopathy, infection; or postsurgical denture insertion (may risk of jaw osteonecrosis); OB: Use only if potential benefit outweighs risks to mother and fetus; Lactation: Lactation; Pedi: Children <18 yr (safety not established); Geri: Consider age-related changes in body mass, renal and hepatic function, concurrent disease states and drug therapy.

Adverse Reactions/Side Effects

GI: diarrhea, dyspepsia, dysphagia, esophagitis, esophageal/gastric ulcer.

MS: musculoskeletal pain, pain in arms/legs, femur fractures, osteonecrosis (primarily of jaw).

Resp: asthma exacerbation.

Misc: ANAPHYLAXIS, injection site reactions.

Interactions

Drug-Drug: Calcium-, aluminum-, magnesium-, and iron-containing products, including antacids (ibandronate should be taken 60 min before). Concentration of NSAIDs including aspirin may risk of greater irritation.

Drug-Food: Milk and other foods adsorb.

Route/Dosage

PO (Adults): 150 mg once monthly.

IV (Adults): 3 mg every 3 mo.

NURSING IMPLICATIONS

Assessment

Osteoporosis: Assess patients for low bone mass before and periodically during therapy. IV: Monitor for signs and symptoms of anaphylactic reactions (swelling of face, lips, mouth or tongue; trouble breathing; wheezing; severe itching; skin rash, redness or swelling; dizziness or limting; fast heartbeat or pounding in chest; sweating) during therapy. Discontinue injection immediately and begin supportive treatment if symptoms occur.

Lab Test Considerations: Assess serum calcium before and periodically during therapy. May cause total alkaline phosphatase levels.

Potential Nursing Diagnoses

Risk for injury (indications)
Implementation

- **PO:** Administer first thing in the morning with 6–8 oz plain water 30 min before other medications, beverages, or food. Tablet should be swallowed whole; do not break, crush, or chew.
- Once-monthly tablet should be administered on the same date each month.

**IV Administration**

- **IV:** Administer using prefilled syringe. Do not administer solution that is discolored or contains particulate matter. Administer IV only; other routes may cause tissue damage.
- **Rate:** Administer as a 15–30 second bolus.
- **Y-Site Incompatibility:** Do not administer with calcium-containing solutions or other IV drugs.

Patient/Family Teaching

- Advise patient to eat a balanced diet and consult health care professional about the need for supplemental calcium and vitamin D. Wait at least 60 min after administration before taking supplemental calcium and vitamin D.
- Encourage patient to participate in regular exercise and to modify behaviors that increase the risk of osteoporosis (stop smoking, reduce alcohol consumption).
- Instruct patient that severe musculoskeletal pain may occur within days, months, or yr after starting ibandronate. Symptoms may resolve completely after discontinuation or slow or incomplete resolution may occur. Notify health care professional if severe pain occurs.
- Advise patient to inform health care professional if swallowing difficulties, chest pain, new or worsening heartburn, or trouble or pain when swallowing occurs; may be signs of problems of the esophagus.
- Advise patient to notify health care professional if swallowing difficulties, chest pain, new or worsening heartburn, or trouble or pain when swallowing occurs.
- PO: Instruct patient on the importance of taking as directed, first thing in the morning, 60 min before other medications, beverages, or food. Ibandronate should be taken with 6–8 oz plain water (mineral water, orange juice, coffee, and other beverages decrease absorption). Do not chew or suck on tablet. If a dose is missed, skip dose and resume the next morning; do not double doses or take later in the day. If a once-monthly dose is missed and the next scheduled dose is >7 days away, take in the morning following the day it is remembered. Resume original schedule the following month. If the next dose is >7 days away, omit dose and take next scheduled dose. Do not discontinue without consulting health care professional.
- Caution patient to remain upright for 60 min following dose to facilitate passage to stomach and minimize risk of esophageal irritation. Advise patient to stop taking ibandronate and contact health care professional if symptoms of esophageal irritation (new or worsening dysphagia, pain on swallowing, retrosternal pain, or heartburn) occur.
- PO: Advise patient that IV doses should not be administered sooner than every 3 mo. If a dose is missed, have health care professional administer as soon as possible; next injection should be scheduled 3 mo from last injection.

Evaluation/Desired Outcomes

- Prevention of or decrease in the progression of osteoporosis in postmenopausal women. Discontinuation after 3–5 years should be considered for women with low risk for fractures.
- PO: Instruct patient that IV doses should not be administered sooner than every 3 mo. If a dose is missed, have health care professional administer as soon as possible; next injection should be scheduled 3 mo from last injection.

**Why was this drug prescribed for your patient?**