toremifene (to-rem-i-feen)

Fareston

Classification
Therapeutic: antineoplastics
 Pharmacologic: antiestrogens

Pregnancy Category D

Indications
Management of metastatic breast cancer in postmenopausal women with estrogen receptor–positive or unknown tumors.

Action
Exerts antiestrogenic effects by competing for estrogen-binding sites found in breast cancers. Therapeutic Effects: Regression of breast cancer.

Pharmacokinetics
Absorption: Well absorbed following oral administration.
Distribution: Widely distributed; 99% bound to plasma proteins.
Protein Binding: 99.5%.
Metabolism and Excretion: Extensively metabolized; undergoes enterohepatic circulation.
Half-life: 5 days.

TIME/ACTION PROFILE (blood levels)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>3 hr</td>
<td>4–6 wk†</td>
</tr>
</tbody>
</table>

†Steady-state blood levels occur after 4–6 wk

Contraindications/Precautions
Contraindicated in: Hypersensitivity; OB, Lactation: Pregnancy or lactation; History of thromboembolic disease; Congenital or acquired QT prolongation, hypokalemia, or hypomagnesemia; Concurrent use of QT-interval prolonging medications or strong CYP3A4 inhibitors, including: ketocnazole, itraconazole, clarithromycin, atazanavir, indinavir, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin, and voriconazole.

Use Cautiously in: Bone metastases (risk of hypercalcemia); Heart failure; Hepatic impairment; Pre-existing endometrial hyperplasia (long-term treatment should be avoided).

Adverse Reactions/Side Effects
CNS: depression, dizziness, headache, lethargy.
EENT: blurred vision, cataracts, corneal keratopathy, dry eyes, glaucoma.
CV: HF, MI, PULMONARY EMBOLISM, TORSADE DE POINTES, angina, arrhythmias, edema, QT interval prolongation, thrombophlebitis.
GI: nausea, elevated liver enzymes, vomiting.
GU: vaginal discharge, vaginal bleeding.
Derm: sweating.
F and E: hypercalcemia.
Hemat: anemia.
Misc: hot flashes, tumor flare.

Interactions
Drug-Drug: QT-prolonging drugs may ↑ the risk of torsade de pointes; avoid concurrent use. Strong CYP3A4 inhibitors, including: ketocnazole, itraconazole, clarithromycin, atazanavir, indinavir, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin, and voriconazole may ↑ levels; avoid concurrent use.
Strong CYP3A4 inducers, including: dexamethasone, phenytoin, carbamazepine, rifampin, rifabutin, and phenobarbital may ↓ levels. Concurrent use of agents that ↓ urinary excretion of calcium (thiazide diuretics ) may ↓ the risk of hypercalcemia. May ↓ the effects of warfarin and phenytoin.
Drug-Natural Products: St. John’s wort may ↓ levels.

Route/Dosage
PO (Adults): 60 mg once daily.

NURSING IMPLICATIONS
Assessment
• Assess for increase in bone or tumor pain. May be indicative of tumor flare and hypercalcemia if during early therapy. Confer with health care professional regarding analgesics. This transient pain usually resolves despite continued therapy.
• Serial clinical examinations and laboratory evaluations should be done regularly; may cause variations in Proctoscopy and sigmoidoscopy.

• Lab Test Considerations: Monitor CBC, platelets, and calcium levels prior to and periodically throughout therapy. May cause transient hypercalcemia in patients with metastases to bone. An estrogen receptor assay should be assessed prior to initiation of therapy.

Nursing Considerations
Use cautiously in: Bone metastases (↑ risk of hypercalcemia); Heart failure; Hepatic impairment; Pre-existing endometrial hyperplasia (long-term treatment should be avoided).
Monitor hepatic function tests periodically during therapy. May cause elevated serum AST, alkaline phosphatase, and bilirubin concentrations.

Potential Nursing Diagnoses
Acute pain (Adverse Reactions)

Implementation
- Hypokalemia and hypomagnesemia should be corrected prior to starting therapy.
- PO: Administer once daily.

Patient/Family Teaching
- Instruct patient to take medication exactly as directed. If a dose is missed, it should be omitted.
- Advise patient to report bone pain to health care professional promptly. This pain may be severe. Inform patient that this may be an indication of the drug's effectiveness and will resolve over time. Analgesics should be ordered to control pain.
- Advise patient that medication may cause hot flashes. Notify health care professional if these become bothersome.
- Instruct patient to notify health care professional promptly if pain or swelling of legs, shortness of breath, weakness, sleepiness, confusion, nausea, vomiting, dizziness, headache, loss of appetite, or blurred vision occurs. Patient should also report menstrual irregularities, vaginal bleeding, pelvic pain or pressure.
- This medication may induce ovulation and may have teratogenic properties. Advise patient to use a nonhormonal method of contraception during and for 1 mo after the course of therapy.

Evaluation/Desired Outcomes
- Decrease in the size or spread of breast cancer.

Why was this drug prescribed for your patient?