**Toremifene Citrate (Fareston®)**

**Patty Gerken, RN, MSN, BC, ANP, AOCN®**

- **Drug name:** Toremifene citrate is manufactured under the brand name Fareston® (Shire Roberts Inc., Florence, KY).

- **Classification:** Hormone oncologic. Toremifene citrate is a nonsteroidal antientrogen, a selective estrogen-receptor modulator. The drug is classified most commonly as an antiestrogen or antineoplastic.

- **Action:** Toremifene citrate binds to estrogen receptors, producing estrogenic and/or antiestrogenic effects. It blocks growth of tumors that are responsive to estrogen, a selective estrogen-receptor modulator.

- **Effect on blood counts:**
  - **Half-life:** Approximately five days.
  - **Route and dosage:** Toremifene citrate is administered as an oral medication with or without food. The recommended dosage is 60 mg.

- **Metabolism:**
  - **Excretion:** Toremifene citrate is excreted in the feces (90%) and urine (10%). Elimination is slow.
  - **Route and dosage:** Toremifene citrate is administered as an oral medication with or without food. The recommended dosage is 60 mg.

- **Side effects:** The most common side effects are hot flashes, vaginal discharge, nausea, and diaphoresis and are more intense at the onset of treatment. Patients with bone metastasis may have some tumor flare (musculoskeletal pain and erythema) and an increased risk for hypercalcemia initially. A serious side effect reported with toremifene citrate is thromboembolism, but this was limited to less than 1%. Other side effects include dry eyes, dizziness, edema, vomiting, and vaginal bleeding.

- **Adverse reactions and effects:**
  - **Common side effects:** Hot flashes, vaginal discharge, nausea, and diaphoresis.
  - **Rare side effects:** Increased risk for hypercalcemia, increased risk for thromboembolism, but this was limited to less than 1%.
  - **Other side effects:** Dry eyes, dizziness, edema, vomiting, and vaginal bleeding.

- **Contraindications:** Toremifene citrate is contraindicated in patients with known hypersensitivity to the drug or its class or components. Caution should be used in patients with a thromboembolic history and impaired liver or renal function. The drug may cause fetal harm when administered to pregnant women. Women with preexisting endomtrial hyperplasia should not be given long-term toremifene citrate. No precautions or reductions are advised for healthy older adults.

- **Availability:** Toremifene citrate is available in 60 mg tablets. The average cost for 30 tablets is $105.99. Shire Roberts Inc. offers a patient assistance program. Patients cannot have prescription coverage—or their prescription coverage must be exhausted—to qualify. They must submit specific financial information. If patients do not qualify for the provided drug, they still may qualify for the cost-sharing program. If a patient does qualify, a 90-day supply is shipped to the doctor’s office for dispensing. Once qualified, there is no limit as to how long the patient can continue to receive the drug.

- **Nursing implications:** Nurses evaluating the use of toremifene citrate should:
  - Assess the menopausal status of patients with breast cancer. Therapy with antiestrogens in pregnant women may cause miscarriages, birth defects, and death of the fetus.
  - Assess patients for history of thromboembolism and liver or renal insufficiency.
  - Review patients’ current prescription and nonprescription medications, including vitamins and herbs.
  - Assess patients for side effects (the most severe is thromboembolism).
  - Conduct periodic monitoring of CBC, LFTs, and calcium level.

- **Patient education:** Patients receiving toremifene citrate should be taught the following.

   - Patty Gerken, RN, MSN, BC, ANP, AOCN®, is a nurse practitioner at the Kansas City Cancer Center-South in Missouri. (Mention of specific products and opinions related to those products do not indicate or imply endorsement by the Oncology Nursing Society.)

- **Key Words:** Selective estrogen receptor modulator, breast neoplasms

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