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 antiestrogen, 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 that is stimulated by the effects of estrogen in the tumor.

**Indication:** The U.S. Food and Drug Administration has approved toremifene citrate for treating locally advanced or metastatic breast cancer in postmenopausal women with hormone receptor positive or unknown status.

In comparative trials, toremifene citrate had similar efficacy to tamoxifen and can be prescribed as an alternative to tamoxifen. Evidence shows that cross-resistance exists between toremifene citrate and tamoxifen, so it would be ineffective as a second-line therapy if treatment failed with tamoxifen. No data on protective heart and bone benefits are available.

**Metabolism:** Toremifene citrate is metabolized through the liver by the cytochrome P-450 isozyme 3A4. Metabolite shares weak antiestrogenic activity.

**Excretion:** Toremifene citrate is excreted in the feces (90%) and urine (10%). Elimination is slow.

**Half-life:** Approximately five days.

**Effect on blood counts:** Rare increase of liver enzymes as well as leukopenia and thrombocytopenia have been reported. Complete blood cell count (CBC) and liver function tests (LFTs) should be monitored periodically.

**Contraindications:** Toremifene citrate is contraindicated in patients with known hypercalcemia or hormone receptor unknown status.

**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:

- 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.

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