Eflornithine

**Class:**
Eflornithine, (DL-alpha-difluoromethylornithine) is a fluorinated analogue of the uncommon amino acid ornithine.

**Antiparasitic Activity:**
Eflornithine is highly effective against *Trypanosoma brucei gambiense* and, when available, is the drug of choice in late-stage Gambian human African trypanosomiasis. Eflornithine is not effective against *Trypanosoma brucei rhodesiense*.

**Mechanisms of Action:**
Eflornithine is an irreversible suicide inhibitor of ornithine decarboxylase, the first enzyme in the biosynthesis of the polyamines putrescine and spermidine.

**Mechanisms of Resistance:**
The mechanisms of eflornithine resistance for *T.b. gambiense* have not yet been elucidated.

**Pharmacokinetics:**
Eflornithine is about 50% orally bioavailable. Its elimination half-life is 3.3 h and 81% is excreted unchanged.

**Dosage:**
The recommended dosage for new cases of late-stage Gambian trypanosomiasis is 100 mg/kg every 6h IV for 14 days. Reduce dosage in renal failure.

**Adverse Effects:**
Hematological: anemia (up to 40%), leukopenia (20-30%) or thrombocytopenia (50%). Seizures associated with high CSF concentrations
Diarrhea (12% IV, 50% po)
Abortion in pregnant women

**Pregnancy:**
Studies with eflornithine have not been done in pregnant women.

**Drug Interactions:**
No data.

**Brand names/Manufacturer:**
Ornidyl™ (Aventis)