

Ziprasidone Drug Monitoring

Indications for Ordering

Optimize drug therapy and monitor patient adherence

Test Description

Quantitative liquid chromatography-tandem mass spectrometry

Tests to Consider

Primary test

[Ziprasidone, Serum or Plasma 2007955](#)

- Predose (trough) concentration at steady state should be assessed
- Trade names – Zeldox, Geodon

Disease Overview

Clinical issues

- Antipsychotic drug used to control the symptoms of
 - Schizophrenia
 - Manic phase of bipolar disorder
- Adverse effects of therapy
 - Somnolence
 - Headache
 - Postural hypotension
 - Tachycardia
 - Dyskinesia

Physiology

- Mechanism of action – unknown, but likely
 - Adjusts the balance of chemicals in the brain that are involved in schizophrenia
 - Acts as antagonist at dopamine D2 and serotonin type 1 and 2 (5HT1D, 5HT2A) receptors
 - Acts as agonist at serotonin 5HT1A receptor
 - Moderately inhibits reuptake of norepinephrine and serotonin
 - Has alpha-blocking and antihistaminic activity
 - Metabolized in liver by CYP3A4 (major enzyme for metabolism) and CYP1A2 (minor enzyme for metabolism)
- Drug profile
 - Drug/drug interactions – multiple
 - Antifungals
 - HIV drugs
 - Erythropoietin drugs
 - Diltiazem, verapamil
 - Cimetidine
 - Differences from other antipsychotic drugs
 - Little to no weight gain
 - No alteration of cholesterol

Test Interpretation

Analytical sensitivity – limit of quantification is 5.0 ng/mL

Results

- Concentration reported
- Therapeutic and toxic ranges are not well established
- Proposed dose-related range – 50.0-200.0 ng/mL