Test Definition: PFN

Propafenone, S

Overview

Useful For

Monitoring propafenone therapy

Assessing potential toxicity

Method Name

Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

NY State Available

Yes

Specimen

Specimen Type

Serum Red

Specimen Required

Patient Preparation: Samples should only be collected after patient has been receiving propafenone for at least 3 days. Trough concentrations should be collected just before administration of the next dose.

Collection Container/Tube: Red top

Submission Container/Tube: Plastic vial

Specimen Volume:1.5 mL

Collection Instructions:

1. Draw blood immediately before next scheduled dose.

2. Centrifuge within 2 hours of draw and aliquot to remove serum from spun RBCs.

Forms

If not ordering electronically, complete, print, and send a Therapeutics Test Request (T831) with the specimen.

Specimen Minimum Volume

0.5 mL

Reject Due To

Gross hemolysis	OK
Gross lipemia	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

Clinical and Interpretive

Clinical Information

Propafenone (Rythmol) is a class 1C cardiac antiarrhythmic used to treat ventricular arrhythmias (ventricular tachycardia, supraventricular tachycardia, and ventricular premature contractions).

Propafenone undergoes extensive first metabolism (half-life is approximately 1-3 hours). Its clinical efficacy is maintained through the formation of a metabolite (5-hydroxypropafenone) that is more pharmacologically active than the parent drug and has a longer half-life (6-12 hours).

Specimens should only be collected after patient has been receiving propafenone orally for at least 3 days. Trough concentrations should be collected just before administration of the next dose. The therapeutic concentration is 0.5-2.0 mcg/mL; concentrations less than 0.5 mcg/mL likely indicate inadequate therapy, and propafenone aboveÂ 2.0 mcg/mL indicates excessive therapy. Adverse side effects are seen in the central nervous system, skin, and gastrointestinal tract.

Reference Values

Trough Value

0.5-2.0 mcg/mL: Therapeutic concentration

>2.0 mcg/mL: Toxic concentration

Interpretation

The therapeutic concentration is 0.5 to 2.0 mcg/mL; concentrations below 0.5 mcg/mL likely indicate inadequate therapy and propafenone above 2.0 mcg/mL indicates excessive therapy.

Cautions

Specimens that are obtained from gel tubes or anticoagulate collections can cause assay interference.

Clinical Reference

1. Nader R, Horwath AR, Wittwer CT: In Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. Sixth edition. St. Louis: Elsevier 2018

2. Burtis CA, Ashwood ER, Bruns DE, et al: In Tietz Textbook of Clinical Chemistry and Molecular Diagnosis. Fifth edition. St Louis: Elsevier. USA 2012

3. Josephson ME, Buxton AE, Marchlinski FE: The tachyarrhythmias: tachycardias. In Harrison's Principles of Internal Medicine. 12th edition. Edited by JD Wilson, E Braunwald, KJ Isselbacher, et al: New York, McGraw-Hill Book Company, 1991, p 915

4. Valdes R Jr, Jortani SA, Gheorghiade M, et al: Standards of Laboratory Practice: Cardiac Drug Monitoring. Clin Chem 1998;44(5):1096-1099

5. Joseph SP, Holt DW: Electrophysiological properties of mexiletine assessed with respect to plasma concentrations. Eur J Cardiol 1980 Feb;11(2):115-121

Performance

Method Description

Protein is precipitated from serum and following centrifugation the supernatant is diluted and analyzed by LC-MS/MS.(Unpublished Mayo Method)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Saturday

Analytic Time

2 days

Maximum Laboratory Time

5 days

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

80299

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
PFN	Propafenone, S	6905-4

Test Definition: PFN

Propafenone, S

Result ID	Test Result Name	Result LOINC Value
80295	Propafenone, S	6905-4