



Laboratory Medicine Bulletin

Plasma Posaconazole by Liquid Chromatography and Tandem Mass Spectrometry – UPDATE 2016

December 15, 2016

In January 2013, St. Paul's Hospital (SPH) began offering therapeutic drug monitoring (TDM) for plasma posaconazole by liquid chromatography and tandem mass spectrometry (LC-MS/MS).

Since then, two new formulations of posaconazole have been introduced, including a delayed-release tablet and an intravenous formulation. Newer formulations are administered once daily and have improved pharmacokinetic profiles. That being said, TDM is still generally recommended due to large intra-individual and inter-individual variation in drug metabolism.¹

Therapeutic drug monitoring for posaconazole can be initiated after one week of regular dosing. Trough levels should be collected immediately prior to the next scheduled dose. The therapeutic range for this drug has not been clearly established, but levels of greater than 700 µg/L are considered adequate for prophylaxis.² Higher levels are associated with better responses to therapy in patients being actively treated for invasive fungal infections.³

The sample type remains the same: plasma collected in a lavender top (EDTA) tube only. Analysis will generally occur on Wednesdays in coordination with voriconazole analyses. If you have any questions regarding this test, please do not hesitate to contact us.

Plasma Posaconazole by LC-MS/MS Specimen Type: EDTA plasma (lavender top)

Daniel T. Holmes, MD FRCPC
Medical Biochemist
dtholmes@providencehealth.bc.ca
604-806-8919

Marc Romney, MD FRCPC
Medical Microbiologist
mromney@providencehealth.bc.ca
604-806-8188

References:

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2. Jang SH, Colangelo PM, Gobburu JV. Exposure-response of posaconazole used for prophylaxis against invasive fungal infections: evaluating the need to adjust doses based on drug concentrations in plasma. *Clin Pharmacol Ther* 2010; 88:115-119.
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