آغا خان یونیورسٹی ہسپتال
The Aga Khan University Hospital

THE AGA KHAN UNIVERSITY HOSPITAL
CLINICAL LABORATORIES

UPDATE HYPEROXALURIA PANEL

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Introduction

Increased urinary oxalate leads to renal stone formation and renal insufficiency and hence identifying the cause of hyperoxaluria has important implications in diagnosis, management, and prognosis.

Hyperoxalurias are classified as primary and secondary. Primary hyperoxaluria is an autosomal recessive inherited disorder of oxalate metabolism while secondary hyperoxaluria is an acquired condition resulting from either increased intake of dietary oxalate or altered intestinal oxalate absorption. Primary hyperoxalurias are further classified into types 1, 2 and 3. This panel includes quantification of urinary oxalate, L-glycerate and glycolate; and thus, will be able to differentiate between type 1 and 2.

Hyperoxaluria Type-1 is an autosomal recessive disorder resulting in a deficiency of peroxisomal alanine: glyoxylate aminotransferase due to variants in the AGXT gene. Increased concentrations of oxalate and glycolate indicate type 1 hyperoxaluria.

Hyperoxaluria Type-2 is due to a defect in GRHPR gene resulting in a deficiency of the enzyme hydroxypyruvate reductase. PH2 is inherited in an autosomal recessive manner. Increased concentrations of oxalate and glycerate indicate type 2 hyperoxaluria.

PRINCIPLE:

Enzymatic spectrophotometric (Urinary oxalate)
Gas chromatography mass spectrometry (Urinary glycolate and L-glycerate)

SPECIMEN COLLECTION:

24-hour urine for oxalate.
Random urine sample for glycolate and L-glycerate.

RESULTS:

Interpretative report will be provided.

SCHEDULE:

Performed on every Thursday and reported on following Tuesday.

PLEASE FILE FOR QUICK REFERENCE

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