28th Feb 2022

Urine Hyperoxaluria Profile

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)

Description of the test is as follows:

Test Name	:	Urine Hyperoxaluria Profile
Mnemonic	:	U-HYPEROXALURIA
Prefix	:	AA
Performing Day	:	Every Thursday
Reporting Day	:	Following Tuesday
Specimen Type	:	24-hour urine for oxalate and Random urine sample for glycolate and L-glycerate
Test Charges	:	Rs: 6500/=
Principle of analysis	:	Spectrometry & Gas chromatography and mass spectrometry

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.