THE AGA KHAN UNIVERSITY HOSPITAL
CLINICAL LABORATORIES

UPDATE
Trans-Tubular Potassium Gradient (TTKG)

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INTRODUCTION:

The trans-tubular potassium gradient (TTKG) is an index reflecting the conservation of potassium in the cortical collecting ducts of the kidneys. It is useful in diagnosing the causes of hyperkalemia or hypokalemia. The TTKG estimates the ratio between the tubular and serum potassium concentrations at the level of the collecting duct, as a surrogate measure of aldosterone effect. Serum and urine osmolality and potassium concentrations are measured concurrently. Higher values of TTKG suggest the kidney is excreting potassium whereas lower values support the conservation of potassium.

PRINCIPLE:

Urine and serum Potassium is analyzed by ISE (ion selected electrode) method and Urine and Serum Osmolality is analyzed on Osmometer using freezing point depression method.

SPECIMEN COLLECTION:

- 5-10 ml of random urine specimen.
- 3-5 cc blood in Gel tube is required.

SCHEDULE:

- Test will be performed daily with next day reporting.

PLEASE FILE FOR QUICK REFERENCE

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