Serum Creatinine

- Measures the level of creatinine, a waste product from muscle metabolism, in the blood.

The precise assessment of renal function is essential for the ongoing management of patients. Evaluating the status of renal function can also serve as an indicator of the progression of kidney disease and help avert harmful drug concentrations in the body. The glomerular filtration rate (GFR) quantifies the rate at which filtered fluid passes through the kidneys. The most reliable method for measuring GFR involves the administration of inulin and the subsequent evaluation of its clearance by the kidneys. Nevertheless, the use of inulin is characterized by its invasive nature, time demands, and high costs. As an alternative, the biochemical marker creatinine, present in both serum and urine, is frequently utilized to estimate GFR (eGFR). Creatinine clearance (CrCl) represents the volume of blood plasma from which creatinine is removed over a specific time frame, providing a swift and economical approach to evaluating renal function. Both CrCl and GFR can be determined through the analysis of urine creatinine, serum creatinine, and urine volume collected over a designated period.

References

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