

Ultrasound Finding of Renal Failure Patients and Creatinine Serum Level Relationship

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Abstract:

An ultrasound scanning has been carried out for 110 patients suspected with variable degrees of Renal Failure (RF) using ultrasound system model (SIEMENS 2D601130), after an assessment of creatinine serum level using Jaffe reaction method. The study revealed that: the common involved age with RF was 61-80 years old and the incidence of RF increases by aging following this equation: $y = 11.6x - 4$ where x refers to age and y refers to RF incidence in percent. Also it is common in Male with 61.8%. The study showed that the Chronic Renal Failure Patients (CRF) having Kidneys volume of 65 cm^3 in mean and those with Acute Renal Failure (ARF) having Kidneys volume of 165 cm^3 in mean. Also the study reveal that the renal volume increased following the increment of creatinine level with a relation follows the following equation; $y = 1.3x + 1.7$ with a significant point at $R^2 = 0.98$, where x and y refers to renal volume and creatinine level respectively for ARF. While for CRF the Kidneys volumes decreases as the creatinine serum level increases based on the following equation $y = -1.3x + 19.1$, with significant point at $R^2 = 0.99$, where x is the renal volume in cm^3 and y is the creatinine serum level in mg/dl . Also the study showed that RF for most of the patients was due to stone (65%), ureters stenosis (20%) and malignant growth (15%).

Keywords: Ultrasound Findings of Renal Failure