



Comparison of Creatinine Levels Determined by Jaffe kinetic and Enzymatic Methods

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Background and Objectives : Measurement of serum creatinine is important for evaluating of kidney function. Several methods have been using for determining of serum creatinine. Jaffe kinetic is the most widely use method for determining of serum creatinine. However, this method gives rather high measure level due to some interfering substances. Therefore, we aim to compare the serum creatinine levels determined by Jaffe kinetic method using in-house reagent to a highly sensitive enzymatic method used in Srinagarind Hospital.

Methods : One hundred and fifteen sera were collected and measured for creatinine levels using enzymatic method from Srinagarind Hospital. Estimated glomerular filtration rate (eGFR) of each sample was calculated. The samples were divided into 5 five groups of 23 each

base upon eGFR <15, 15-29, 30-59, 60-89 and e"90 mL/min, respectively. After that all samples were further measured for creatinine levels by Jaffe kinetic method.

Results : The concordance of creatinine levels between the two methods was found in the group with eGFR of <15 and 15-29 mL/min. By contrast, the disagreement of the two methods with significant difference (p-value <0.05) was also found in the group with eGFR of 30-59, 60-89 and e"90 mL/min, respectively.

Conclusions : As a result, care must be taken in interpreting the result when serum creatinine level is measured by different principles.

Keywords : Estimated glomerular filtration rate, Jaffe kinetic method, enzymatic method