Evaluation of renal function in individual with severe physical activity

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Background: The kidney is a organ that has a crucial role in acid-base balance, waste removal and regulation of blood pressure that can be affected by several factors such as dehydration, severe physical activity and dietary habits. Assessment of renal function can be done by measurement of serum creatinine, its clearance and also serum Cystatin C levels. We aimed to evaluated renal function by use of serum creatinine and Cystatin C in group of people with severe physical activity.

Patients and method: this prospective study was conducted on 40 individuals with 6 hours daily severe physical activity and 8 healthy non-athlete people as control. Initially serum creatinine and Cystatin C was measured and then after one week and also one month with severe physical activity was measure again. Finally statistical analysis was done by SPSS software.

Result: our study revealed statistically significance different between Cystatin C level at beginning of practice and one week after severe physical activity but no creatinine level (P < .05). We also found no significant different between both cystatin C and creatinine at the beginning and one month later (P > .05).

Conclusion: In person with high physical activity such as athlete and Militaries kidneys did not affect by sever activity.

Keywords: renal function, Cystatin C, creatinine