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GLOMERULAR FILTRATION RATE IN LIVER CIRRHOSIS

Abstract

Liver cirrhosis (LC) is often accompanied by functional renal failure. The mortality was significantly greater in LC patients with creatinine clearance less than 50 ml/min. Indicators of moderately impaired renal function are of great clinical importance. Serum creatinine concentration, the best establish simple parameter of glomerular filtration rate (GFR), has some disadvantages: its concentration depends on sex and muscle mass and shows marked increases only at severely reduced creatinine clearance values. Cystatin C has recently been suggested as a sensitive marker of GFR and as early indicator of impaired renal function. Cystatin C serum concentration appears to be independent of sex and muscle mass. The determination of cystatin C is not affected by bilirubin or haemolysis. The objective of this study was to investigate the correlation between GFR (based on cystatin C levels) and hepatic index in patients with LC at Dr. Soetomo Hospital. This study used cross-sectional design, involving population of liver cirrhosis patients who had eligible inclusion and exclusion criteria. It was found that GFR (based on cystatin C levels) in patients with LC with mild hepatic failure is 60.625 ± 17.631, moderate hepatic failure is 50.231 ± 12.029, and severe hepatic failure 16.960 ± 8.438. There was a strong negative correlation between GFR (based on cystatin C levels) and hepatic index based on score levels (r -0.646; 0.0001) and based on stadium levels (r -0.636; p 0.001) in LC patients.

In conclusion, based on cystatin C serum level, GFR in patients LC with mild hepatic failure higher than those in moderate hepatic failure and severe hepatic failure. GFR does not play a major role in determining hepatic index. Nevertheless, GFR in patients LC with mild hepatic failure higher than those in moderate hepatic failure and severe hepatic failure.

Keyword : glomerular, filtration, rate, cystatin, C, liver, cirrhosis,

Daftar Pustaka :