

Sel epitel tubulus ginjal pada sedimen urin sebagai penanda kerusakan ginjal pada penderita diabetes mellitus = Renal tubular epithelial cells in urinary sediment as a marker of kidney damage in diabetes mellitus patients

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Abstrak

Diabetes mellitus DM dapat menyebabkan kerusakan ginjal dan nefropati diabetik merupakan penyebab gagal ginjal tersering. Penelitian ini bertujuan untuk mengetahui jumlah sel epitel tubulus ginjal dalam sedimen urin yang dapat dijadikan penanda kerusakan ginjal pada penderita DM. Penelitian ini juga bertujuan mencari nilai cut off jumlah sel epitel tubulus ginjal sebagai penanda kerusakan ginjal pada penderita DM, korelasi antara jumlah sel epitel tubulus ginjal dengan urine albumin/creatinine ratio UACR dan ?2-microglobulin urin serta korelasi antara ?2-microglobulin serum dengan UACR.

Desain penelitian adalah potong lintang deskriptif analitik dengan 90 subjek, penelitian berlangsung selama Juni hingga Oktober 2017. Sampel menggunakan urin dan serum penderita diabetes mellitus. Jumlah sel epitel tubulus ginjal diperiksa dengan Sysmex UF-4000. Kadar albumin urin diperiksa dengan Nycocard. Kadar ?2-microglobulin serum dan urin serta kreatinin urin diperiksa dengan Cobas C501.

Hasil penelitian didapatkan perbedaan bermakna jumlah sel epitel tubulus ginjal pada kelompok nefropati diabetik dengan non nefropati diabetik 2,4 sel /?L vs 1,6 sel /?L . Tidak ada korelasi antara jumlah sel epitel tubulus ginjal dengan UACR dan ?2-microglobulin urin. Korelasi antara ?2-microglobulin serum dengan UACR adalah lemah dan bermakna.

Diabetes mellitus DM can cause kidney damage and diabetic nephropathy is the most common cause of renal failure. This study aimed to determine the number of renal tubular epithelial cells in urine sediments that could be used as a marker of kidney damage in patients with DM. This study also aimed to determine cut off point of renal tubular epithelial cells as a marker of kidney damage in patients with DM, the correlation between the renal tubular epithelial cells with urine albumin creatinine ratio UACR and 2 microglobulin urine and the correlation between serum 2 microglobulin and UACR.

The study design was cross sectional, descriptive analytic with 90 subjects, the study took place during June to October 2017. The sample used urine and serum of diabetic patients. The renal tubular epithelial cells was examined with Sysmex UF 4000. Urinary albumin levels are determined with Nycocard. Serum 2 microglobulin and urine and urinary creatinine levels were determined with Cobas C501.

The results showed significant differences in number of renal tubular epithelial cells in the diabetic nephropathy group with non diabetic nephropathy 2.4 cells L vs. 1.6 cells L . There was no correlation between the number of renal tubular epithelial cells with UACR and urine 2 microglobulin. The correlation between serum 2 microglobulin with UACR was weak and significant.