Cedera Tubular pada anak dengan Sindrom Nefrotik Resisten Steroid = Tubular injury in children with steroid resistant nephrotic syndrome

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Abstrak

[ABSTRAK
Lesi tubular lebih sering ditemukan pada sindrom nefrotik resisten steroid (SNRS) dengan proteinuria masif, yang menyebabkan disfungsi tubulus proksimal. Cedera tubular dapat pula didiagnosis dengan uji fungsi tubulus, diantaranya adalah fraksi ekskresi magnesium (FE Mg) dan β2-mikroglobulin (β2M) urin. Tujuan penelitian ini membandingkan FE Mg dan β2M urin pada SNRS dan SN sensitif steroid (SNSS) remisi. Penelitian potong lintang dilakukan di Departemen Ilmu Kesehatan Anak RSUPN Dr. Cipto Mangunkusumo Jakarta, RSUD Ulin Banjarmasin, RSUP Fatmawati dan RSAB Harapan Kita Jakarta pada Juli sampai Desember 2015 pada penderita SNRS dan SNSS remisi berusia 2 ? 15 tahun. Pada subyek diperiksakan kadar β2M urin dan FE Mg. Didapatkan 62 subyek yang terdiri dari 31 subyek SNRS dan 31 subyek SNSS remisi. Rerata FE Mg pada SNRS lebih tinggi secara bermakna dibandingkan SNSS remisi (p=0,0065). Median kadar β2M urin pada SNRS lebih tinggi dibandingkan SNSS remisi (p < 0,001). Peningkatan kadar β2M urin lebih banyak secara bermakna pada SNRS dibandingkan SNSS (p=0,007). Dengan titik potong 1,64%, peningkatan FE Mg pada SNRS lebih banyak dibandingkan SNSS remisi (p=0,022). Simpulan: Fraksi ekskresi Mg dan β2M urin pada SNRS lebih tinggi dibandingkan SNSS remisi. Terdapat perbedaan proporsi peningkatan FE Mg antara SNRS dan SNSS remisi. Proporsi peningkatan β2M urin pada SNRS lebih besar dibandingkan SNSS remisi.
<hr>ABSTRACT
Tubular lesions more often found in steroid-resistant nephrotic syndrome (SRNS) with massive proteinuria, leading to proximal tubular dysfunction. Tubular injury can also be diagnosed by tubular function test, such as fractional excretion of magnesium (Mg FE) and urinary β2-microglobulin (β2M). The aim of this study is to compare the FE Mg and urinary β2M on SRNS and steroid-sensitive nephrotic syndrome (SSNS) in remission. A cross-sectional study was conducted in the Department of Pediatrics RSUPN Dr. Cipto Mangunkusumo Jakarta, RSUD Ulin Banjarmasin, RSUP Fatmawati and RSAB Harapan Kita Jakarta from July to December 2015. Children aged 2-15 years who either had SRNS or SSNS in remission were recruited. Fractional excretion of magnesium and urinary β2M levels were examined. There were 62 subjects consisted of 31 subjects SRNS and 31 subjects SSNS in remission. The mean FE Mg on SRNS was significantly

higher than SSNS in remission (p=0.0065). Median levels of urinary β2M on SRNS was higher than SNSS remission (p<0.001). Increased levels of urinary β2M was more significantly in SRNS compared to SSNS (p=0.007). With a cutoff point of 1.64%, an increased of FE Mg proportion on SRNS was more than SSNS in remission (p = 0.022). Conclusion: Fractional excretion of Mg and urinary β2M on SRNS were higher than SSNS in remission. There is a difference between the increased of FE Mg on SRNS and SSNS in remission. The increased of urinary β2M on SRNS was higher than SSNS in remission.;Tubular lesions more often found in steroid-resistant nephrotic syndrome (SRNS) with massive proteinuria, leading to proximal tubular dysfunction. Tubular injury can also be diagnosed by tubular function test, such as fractional excretion of magnesium (Mg FE) and urinary β2-microglobulin (β2M). The aim of this study is to compare the FE Mg and urinary β2M on SRNS and steroid-sensitive nephrotic syndrome (SSNS) in remission. A cross-sectional study was conducted in the Department of Pediatrics RSUPN Dr. Cipto Mangunkusumo Jakarta, RSUD Ulin Banjarmasin, RSUP Fatmawati and RSAB Harapan Kita Jakarta from July to December 2015. Children aged 2-15 years who either had SRNS or SSNS in remission were recruited. Fractional excretion of magnesium and urinary β2M levels were examined. There were 62 subjects consisted of 31 subjects SRNS and 31 subjects SSNS in remission. The mean FE Mg on SRNS was significantly higher than SSNS in remission (p=0.0065). Median levels of urinary β2M on SRNS was higher than SNSS remission (p<0.001). Increased levels of urinary β2M was more significantly in SRNS compared to SSNS (p=0.007). With a cutoff point of 1.64%, an increased of FE Mg proportion on SRNS was more than SSNS in remission (p = 0.022). Conclusion: Fractional excretion of Mg and urinary β2M on SRNS were higher than SSNS in remission. There is a difference between the increased of FE Mg on SRNS and SSNS in remission. The increased of urinary β2M on SRNS was higher than SSNS in remission., Tubular lesions more often found in steroid-resistant nephrotic syndrome (SRNS) with massive proteinuria, leading to proximal tubular dysfunction. Tubular injury can also be diagnosed by tubular function test, such as fractional excretion of magnesium (Mg FE) and urinary β2-microglobulin (β2M). The aim of this study is to compare the FE Mg and urinary β2M on SRNS and steroid-sensitive nephrotic syndrome (SSNS) in remission. A cross-sectional study was conducted in the Department of Pediatrics RSUPN Dr. Cipto Mangunkusumo Jakarta, RSUD Ulin Banjarmasin, RSUP Fatmawati and RSAB Harapan Kita Jakarta from July to December 2015. Children aged 2-15 years who either had SRNS or SSNS in remission were recruited. Fractional excretion of magnesium and urinary β2M levels were examined. There were 62 subjects consisted of 31 subjects SRNS and 31 subjects SSNS in remission. The mean FE Mg on SRNS was significantly higher than SSNS in remission (p=0.0065). Median levels of urinary β2M on SRNS was higher than SNSS remission (p<0.001). Increased levels of urinary

β2M was more significantly in SRNS compared to SSNS (p=0.007). With a cutoff point of 1.64%, an increased of FE Mg proportion on SRNS was more than SSNS in remission (p = 0.022). Conclusion: Fractional excretion of Mg and urinary β2M on SRNS were higher than SSNS in remission. There is a difference between the increased of FE Mg on SRNS and SSNS in remission. The increased of urinary β2M on SRNS was higher than SSNS in remission.]