A Correlation on the Occurrence of Microalbuminuria as a Potential Indicator of Early Renal Dysfunction Among Arthritis Patients

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Arthritis is the main cause of disability among people over 55 years of age in industrialized countries. Arthritis pertains to sudden or gradual appearance of pain, stiffness, and swelling in or around the joints. Urinary albumin excretion of 20 to 200 mg/L is called microalbuminuria. It is an early indication of diabetes mellitus, hypertension, cardiovascular diseases, and renal damage. The study aimed to find a correlation between microalbuminuria and disease duration among patients with 0.5 to 4.4 years duration of joint inflammation and 4.5 to 7.0 years of joint inflammation. The study also aimed to determine a significant correlation between microalbuminuria and disease activity parameter reflected by C-reactive protein (CRP) against different factors and laboratory parameters. Thirty patients with 0.5 to 4.4 years of joint inflammation and another 30 patients with 4.5 to 7.0 years were enrolled in the study, making sure that they did not have diabetes mellitus, hypertension, cardiovascular disease, or any present or previous renal disease. Thirty healthy subjects with the same inclusion-exclusion criteria set as with the experimental group also participated in the study. All studied persons were subjected to history taking by answering questionnaires. Laboratory tests performed included FBS/HbA1c, lipid profile/CPK-MB, BUN, creatinine, CRP, and routine urinalysis. Microalbuminuria was measured using quantitative immunologic procedure. Results showed that patients with joint inflammation of 4.5 to 7.0 years is 5.8 times (OR = 5.8; CI 95%: 1.3 to 36.7) more likely to have increased microalbumin as compared to those with 0.5 to 4.4 years of joint inflammation and healthy individuals. C-reactive protein was correlated with age ($R = 0.382, P = .001$) and BUN ($R = 0.2, P = .0046$). Microalbuminuria can be used to detect early renal dysfunction among joint-inflamed and healthy individuals in relation to their disease duration and disease activity.

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