A Preliminary Investigation of the Association between Serum Uric Acid and Impaired Renal Function

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摘要

Abstract

BACKGROUND: Hemodialysis for end-stage renal disease (ESRD) incurs huge medical costs in Taiwan. We set out to determine if it is possible to help control chronic renal disease with early treatment of hyperuricemia. METHODS: Data from Taipei Medical University Hospital (TMUH) health center from January 2004 to December 2006 were analyzed to correlate renal function and blood uric acid concentration. Patients were divided into 5 groups according to their serum uric acid concentration (< 4; 4 approximately 5.9; 6 approximately 7.9; 8 approximately 9.9, and > 10 mg/dl). According to our laboratory data, elevated serum creatinine levels (> 1.3 mg/dL) indicated impaired renal function. RESULTS: In total, there were 5722 patients, including 2816 (49.2%) men and 2906 (50.8%) women, with a median age of 67. Impaired renal function was noted in 307 (5.4%) cases. Serum uric acid was significantly correlated with blood urea nitrogen and serum creatinine. Groups with a higher serum uric acid level had an increased risk of impaired renal function. CONCLUSION: Our purpose in this preliminary observation was to try to define a starting point for the early control of serum uric acid, in order to avoid the development of impaired renal function. We found that serum uric acid level to < 6 mg/dl seemed to be associated with less renal function impairment