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INFLUENCES ON RENAL FUNCTION IN CHRONIC SPINAL CORD INJURY PATIENTS.	
<p><u>Aims of Study</u> The optimal method of bladder management in the spinal cord injury population remains controversial. The objective of the current study was to determine the significance of bladder management and other factors on renal function in this population.</p> <p><u>Methods</u> The medical records and upper tract imaging studies of 308 patients with a mean follow-up interval since injury of 18.7 years were reviewed. Renal function was assessed by measurement of serum creatinine, creatinine clearance, proteinuria, and the presence or absence of upper tract abnormalities, as evaluated by renal ultrasound and nuclear medicine renal scan. Independent variables studied to determine influence on renal function included patient age, time interval since injury, level of injury, completeness of injury, presence or absence of vesicoureteral reflux, history of diabetes mellitus, and bladder management method.</p> <p><u>Results</u> The mean (\pm standard deviation) serum creatinine levels of the chronic Foley catheterization, clean intermittent catheterization (CIC), and spontaneous voiding groups were 1.08 (\pm0.99), 0.84 (\pm0.23), and 0.97 (\pm0.45) mg/dl, respectively (ANOVA $p < 0.01$, T test $p = 0.10$). The mean creatinine clearance values of the Foley, CIC, and voiding groups were 91.1 (\pm46.5), 113.4 (\pm39.8), 115.0 (\pm49.0) ml/min, respectively (ANOVA $p < 0.01$, T test < 0.01). The number (percent) of patients with proteinuria was 19 (6.2%) in the Foley group, 3 (1.0%) in the CIC group, and 4 (1.3%) in the spontaneous voiding group (chi-square $p < 0.01$). Fifty-six (18.2%), 20 (6.5%), and 24 (7.8%) patients had upper tract abnormalities in the Foley, CIC, and voiding groups (chi-square $p < 0.01$). The multiple regression analyses indicated no significant predictors of serum creatinine but older patient age and Foley catheterization significantly predicted low creatinine clearance. Additional logistic regression analyses showed Foley catheterization associated with proteinuria and vesicoureteral reflux associated with upper tract abnormalities.</p> <p><u>Conclusions</u> While renal function can be preserved with all forms of bladder management, the use of chronic indwelling catheters is an independent predictor for the development of both impaired renal function and pathological proteinuria.</p>	

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