

COMORBIDITIES AFFECT THE HEALTH-RELATED QUALITY OF LIFE OF PATIENTS WITH UROLITHIASIS: CROSS-SECTIONAL ANALYSIS FROM THE NORTH AMERICAN STONE QUALITY OF LIFE CONSORTIUM

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INTRODUCTION AND OBJECTIVES: The aim of this study was to evaluate the hypothesis that having certain comorbidities reduces patients' stone-related quality of life. Patients from 11 urology sites across North America completed the Wisconsin Stone Quality of Life questionnaire (WISQOL), a stone-specific instrument designed to assess the health-related quality of life (HRQOL) of patients with urolithiasis.

METHODS: This cross-sectional study comprised 2,019 patients who completed the WISQOL and for whom comorbidities at the time of WISQOL completion were documented. Patient comorbidities were prospectively selected from a list of 24; those with prevalence $\geq 5\%$ were included in the analyses. Hierarchical regression and MANOVA were performed to examine the relationship with HRQOL.

RESULTS: Patients were 51.5% men, 53.4 ± 14.4 years old, and had a BMI at enrollment of 30.3 ± 7.5 kg/m². Comorbidities (prevalence) were: hypertension (36%), dyslipidemia (21%), depression/anxiety (20%), diabetes mellitus type 2/borderline-diabetes (DM/BDM; 16%), gastroesophageal reflux (13%), irritable/inflammatory/short bowel (IBS/SB; 7.4%), cardiovascular disease (7.3%), hypothyroidism (7.1%), osteoporosis/osteopenia (6.6%), gout (5.4%), and degenerative joint disease (5.1%). Nearly half (46.2%) had ≥ 2 of the 24 comorbidities of concern. Overall, the number of patients' comorbidities did not correlate with total WISQOL score ($R = -0.08$), but patients with ≥ 2 comorbidities had significantly lower scores than those with ≤ 1 ($P = 0.001$). DM/BDM, IBS/SB, and depression/anxiety were significantly inversely associated with patient HRQOL ($P < 0.035$, MANOVA) when controlled for presence of a stone(s) or stone-related symptoms at time of WISQOL completion. Depression/anxiety without pharmacologic treatment was associated with lower HRQOL compared to patients without depression/anxiety ($P < 0.0001$ for those with a stone and symptoms, MANOVA) and to patients with depression/anxiety but on pharmacologic treatment ($P = 0.014$ for those with a stone, MANOVA). IBS/SB did not adversely influence patients' HRQOL when they had no stone(s) or stone symptoms but did when patients reported having a current stone(s) and symptoms ($P < 0.0001$ and $P = 0.003$, MANOVA).

CONCLUSIONS: DM/BDM, IBS/SB, and depression/anxiety were significantly inversely associated with patients' stone-related HRQOL. In patients with a stone(s) and stone-related symptoms, untreated depression/anxiety further reduced HRQOL. Efforts to treat or manage these comorbidities may enhance patients' stone-related HRQOL and potentially improve traditional stone-related outcomes.

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