

Correlation between urodynamic parameters and quality of life in patients with neurogenic bladder using the Qualiveen-30 questionnaire.

Objective:

To evaluate the correlation between urodynamic parameters and quality of life in patients with neurogenic bladder using the Qualiveen-30 questionnaire.

Methods:

This prospective observational study was conducted at the Department of Urology, Lady Reading Hospital, Peshawar, from January to June 2025. A total of 217 patients aged ≥ 18 years with neurogenic bladder due to spinal cord injury, multiple sclerosis, diabetic neuropathy, Parkinson's disease, or stroke were enrolled. Multichannel urodynamic studies were performed to assess detrusor overactivity, bladder compliance, leak point pressure, bladder capacity, and post-void residual volume. Quality of life was measured using the Qualiveen-30 questionnaire. Pearson's and Spearman's correlation tests were applied along with multivariate regression analysis to determine predictors of poor quality of life.

Results:

Detrusor overactivity was observed in 63.6% of patients and reduced bladder compliance in 48.4%. Mean Qualiveen-30 score was 52.8 ± 14.2 indicating moderate to severe impact. A strong negative correlation was found between bladder compliance and total QoL score ($r = -0.54$, $p < 0.01$). Detrusor leak point pressure showed a positive correlation with limitation scores ($r = 0.43$, $p < 0.05$). Multivariate analysis identified reduced compliance ($\beta = -0.32$, $p < 0.01$) and detrusor overactivity ($\beta = 0.27$, $p < 0.01$) as independent predictors of poor quality of life.

Conclusion:

Urodynamic findings, particularly poor bladder compliance and detrusor overactivity, are strongly associated with diminished quality of life in neurogenic bladder patients. A multidisciplinary, patientcentered approach addressing both physiological and psychosocial domains is essential for optimal management.

Keywords:

Neurogenic bladder, Urodynamics, Quality of life, Bladder compliance, Detrusor overactivity, Qualiveen questionnaire