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FACTORS AFFECTING THE AGREEMENT BETWEEN CLINICAL AND URODYNAMIC DIAGNOSIS IN MALE PATIENTS WITH RESISTANT TO MEDICAL TREATMENT LUTS: FOCUS ON SELF-REPORTED QUALITY OF LIFE IMPAIRMENT.

Hypothesis / aims of study

Male lower urinary tract symptoms (LUTS) resistant to medical treatment in conjunction with severe self-reported quality of life (QoL) impairment are amongst the indications for more invasive treatment options. However, only two thirds of patients operated for BPE-associated LUTS have urodynamically confirmed obstruction, while approximately 30% will experience post-operative reminiscing LUTS, mainly of OAB origin. Disagreement between patients' reported LUTS, urodynamic study (UDS) diagnosis and self-reported QoL has been demonstrated in large population-based studies. In addition, large studies of patients suffering from urinary incontinence have shown correlations between psychosocial parameters, urinary symptoms and QoL.
The aim of this study was to identify independent factors of disagreement between clinical and UDS parameters in male patients with resistant to medical treatment LUTS, with a special focus on self-reported quality of life impairment.

Study design, materials and methods

Male patients with resistant to medical treatment LUTS that sought help in a General Hospital's outpatient clinic and were submitted to diagnostic UDS comprised the study sample of this exploratory study. As per routine, all were evaluated with a complete medical history and IPSS questionnaire, uroflow, and urinary tract ultrasonography. They were categorized into two groups according to the IPSS-QoL question score: Group A with IPSS-QoL score ≥ 5 (severe QoL impairment), and Group B with IPSS-QoL ≤ 4 (mild or moderate QoL impairment).
In order to evaluate agreement of clinical symptoms with UDS diagnosis, patients were divided into three categories using an OAB-index (OAB-index = (IPSS Question 2 + IPSS Question 4 + IPSS Question 7) / IPSS total), proposed for the purposes of the study. An OABi>0.6 would indicate predominant storage symptoms and a UDS-diagnosis of Detrusor Overactivity (DO) without Bladder Outlet Obstruction (BOO) would be anticipated for agreement. An OABi between 0.4 and 0.6 would indicate mixed symptoms and a UDS-diagnosis of DO plus BOO would be anticipated, while an OABi<0.4 would indicate predominant voiding symptoms and a UDS-diagnosis of BOO would be anticipated for agreement. Urodynamic diagnosis of BOO was defined by a combination of urethral resistance factor (URA) ≥ 29 and linear passive urethral resistance relation (LPURR) ≥3.
Bladder or prostate cancer, bladder reconstruction surgery, neurogenic bladder, bladder stone disease, prostatitis type I, II and IIIA, and major pelvic surgery were exclusion criteria for study entry. The Independent two-sample t test was used for continuous variables and x^2 Fischer's exact test for categorical variables. A Logistic Regression model was built for multivariate analysis.

Results

Ninety nine patients were included in the study (Group A: 31, Group B: 68). The IPSS was higher in group A patients (18.9±7.5 vs 15.9±6.6, p=0.049). No differences were observed in OAB-index, Nocturia, Qmax or PVR. From medical history, a history of psychiatric or psychological disorders was significantly more common among group A patients (48.4% vs 13.2%, p=0.0003), as well as a history of chronic pain syndromes (A: 22.6 % vs B: 4.4%, p=0.01) and sexual dysfunction (A: 38.7% vs B: 13.2%, p=0.017).
Agreement between clinical and UDS diagnosis was significantly different between the 2 groups (A: 29% vs B: 57.4%, p=0.010), as well as a UDS-diagnosis of BOO (A: 29% vs B: 57.4%, p=0.010). In univariate analysis, severe QoL impairment, and a history of psychiatric/psychological disturbance, chronic pain syndromes, or sexual dysfunction were strong predictors of disagreement between clinical and UDS diagnosis (Table 1, categorical variables), whereas younger age, higher Qmax, larger voided volumes, better bladder voiding efficiency and smaller prostate volumes were the continuous variables which could predict a disagreement between clinical and UDS diagnosis (Table 2, continuous variables)

Table 1. Categorical variables predicting disagreement between clinical and UDS diagnosis in univariate analysis.

Risk Factor	**% of Disagreement with factor**	**% of Disagreement without factor**	**Unadjusted OR for factor (95% CI)**	**Chi-Square**	**P Value**
Group A QoL	71.0%	42.6%	3.29 (1.32, 8.19)	6.838	=0.01
Psychiatric	70.8%	45.3%	2.93 (1.09, 7.89)	4.733	=0.036
Painful Syndroms	90%	47.2%	10.07 (1.22, 82.86)	6.589	=0.016
Sexual Dysf	71.4%	46.2%	2.92 (1.03, 8.30)	4.232	=0.048

Table 2. Continuous variables predicting disagreement between clinical and UDS diagnosis in univariate analysis.

Risk factor	**Clinical-UDS Agreement**	**Clinical-UDS Disagreement**	**P value**
Age	57.23±14.99	49.90±19.80	= 0.04
Qmax	8.69±5.80	12.08±7.74	=0.016
VV	165.73±131.34	248.95±176.07	=0.009

BVE%	60.17±33.51	74.82±28.86	=0.022
Vpro	42.83±21.43	31.18±20.43	=0.007

Similarly, younger age (A: 47.1±15.8 vs B: 56.4±17.0, p=0.016), smaller prostate volume (A: 27.6±11.3 vs B: 41.0±23.7, p<0.0001), and better Bladder Voiding Efficiency (BVE) index (A: 78.9±29.1 vs B: 62.6±32.0, p=0.018) were independent predicting factors for severe QoL impairment.

In multivariate analysis the history of psychiatric or psychological disorder and chronic pain syndromes were independent predictors of both disagreement between clinical and UDS diagnosis (OR: 3.58 (1.28-9.98 CI), p=0.015 and OR: 11.21 (1.31, 96.04), p=0.027, respectively) and severe QoL impairment (OR: 7.8 (2.4-25.4 CI), p=0.001 and OR: 7.1 (1.3-38.0 CI), p=0.023, respectively).

Interpretation of results

Male patients with resistant to medical treatment LUTS that report severe QoL impairment (score ≥5 in the IPSS QoL question) seem to be younger, with smaller prostate volume, better BVE index and mixed or predominantly storage LUTS. Importantly, their clinical diagnosis based on self-reported symptoms could disagree with their UDS findings. A medical history of psychiatric/psychological disturbance or chronic pain syndromes are independent predictors of both a disagreement between clinical and urodynamic diagnosis and of severe QoL impairment.

Concluding message

Patients with resistant to medical treatment LUTS who report severe QoL impairment on IPSS should be investigated with caution, including complete medical history with focus on psychiatric and psychological disorders, as well as chronic pain syndromes. Complete urodynamic evaluation is recommended in those patients as part of the decision-making process when it concerns more invasive treatment options in order to minimise treatment failures.

Disclosures

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