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THE TRS SYSTEM: A NEW CLASSIFICATION SCHEME FOR URODYNAMIC FINDINGS

Hypothesis / aims of study

Urodynamic (URD) testing is used to assess lower urinary tract dysfunction. However, most results are descriptive in nature and do not provide an adequate means to communicate or categorize the data. Similar to the TNM classification used for cancers, the TRS system was developed to categorize and quantify results of URD. We endeavored to assess the TRS [T (tone), R (reflex excitability), S (sensation)] classification system in terms of inter-observer variability and relation to treatment outcome for a mixed population of patients evaluated for varying bladder complaints.

Study design, materials and methods

This was a retrospective review. Consecutive patients underwent urodynamic studies for various lower urinary tract complaints including: stress incontinence, pelvic pain, urgency, urgency incontinence, recurrent UTI's, and bladder outlet obstruction. Two independent urologists used the TRS system (see table) to classify these studies.

The TRS classification system:

Value	**Definition**
T = Tone	***Change in pressure/change in volume prior to voiding***
T3	Rise above baseline between 0 – 100 cc
T2	Rise above baseline between 101 – 200 cc
T1	Rise above baseline greater than 201 cc
T0	No rise above baseline until contraction occurs
R = Reflex Excitability	***Volume at which an involuntary contraction occurs***
R3	Less than 100 cc
R2	100 – 200 cc
R1	201 – 350 cc
R0	Normal contraction between 351 – 500cc
R - 1	No contraction
S = Sensitivity	***Volume at which there is a noxious urge to void***
S3	Less than 100cc
S2	100 – 200cc
S1	201 – 350cc
S0	351 – 500cc (Normal sensation)
S - 1	Greater than 500cc or no sensation to void

Results

115 patients were assessed using the TRS system. The two independent urologists found the same TRS classification for 112 of the 115 urodynamic studies (97.4%). The remaining 3 studies had only one value off between the two urologists.

Interpretation of results

The TRS system is a useful tool for categorizing urodynamic studies. There was excellent correlation and minimal variability between the two urologists' TRS classifications.

Concluding message

We evaluated a new classification scheme for urodynamic data and observed minimal inter-observer variability. We feel that this system is simple to understand and use, allowing more objective and useful data to be gained from urodynamics. The classification allows for accurate communication of the varied nature of lower urinary tract dysfunction and formulation of a treatment plan that addresses both the severity and varied component make up of the dysfunction. We are actively assessing whether the TRS system can be used to determine prognosis and treatment efficacy.

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What were the subjects in the study?	**NONE**