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# Abstract Reproduction Form B-1

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Title (type in CAPITAL LETTERS): PROXIMAL THIRD AREA OF THE STATIC URETHRAL PRESSURE PROFILE IN THE EVALUATION OF INTRINSIC SPHINCHTERIC DEFICIENCY

Aims of Study: There are no satisfactory urodynamic parameters that define intrinsic sphinchteric deficiency of the bladder neck (ISD-BN. The purpose of this study is to determine if two parameters derived from the static urethral pressure profile (UPP); namely, the proximal third area (PTA) and the proportion of the proximal third area to the total area (PTA/TA) might be useful in describing ISD-BN because it corresponds more closely to the anatomic region of the bladder neck and proximal urethra than other commonly used urodynamic parameters.

Methods: We performed a retrospective analysis of 117 patients who underwent multichannel urodynamics testing from January 1996 through September 1998 on a MMS UD-2000. Genuine Stress Incontinence (GSI) was diagnosed by videocystourethrogaphy. Stress leak point pressure (SLPP) was determined with the patient in the standing position and symptomatically full bladdder. Urethral pressure profiles (UPP's) were performed with the patient in the supine posiotn and empty bladder. A Lifetech model UPP-10D perfusion-type catheter and Advan Medical Products #9200 disposable pressure transducers were used. The puller rate was 60mm/minute and room temperature sterile saline was infused at 2ml per minute. UPP's were post-processed to zero the baselines and to ensure accurate start and end points. Custom software was supplied by MMS Holland to compute the PTA. Two consecutive UPP's were completed for each patient. Analysis of urodynamic parameters was completed using SPSS Base® Version 8.0 and SPSS Professional® Statistics Version 7.5.

Results: Analysis of the internal consistency of the PTA yielded a mean coefficient, (equivalent to Pearson's *r*), of 0.76 ($p < .001$). The standardized value for Cronbach's $\alpha$ was 0.87. These values exceeded those for the internal consistency of a commonly used index, the proximal area to the peak, ($r = 0.62$, $p < .001$); standardized Cronbach's $\alpha$ =0.77). The following additional data will presented and discussed:

1. Scatter plots with correlation co-efficients and $r^2$ for stress leak point pressure (SLPP) versus length to peak (LTP), functional urethral length (FUL), PTA/TA, area to peak (ATP), PTA, maximal urethral closure pressure (MUCP), and total area (TA).
2. Scatter plots with correlation co-efficients for MUCP versus the above parameters.
3. Relative frequency polygoms for each parameter comparing GSI to continent patients.
4. Reliabiity analysis for each parameter.

Conclusions: This preliminary study demonstrates that PTA has good test-retest reliability when compared with other UPP parameters. It can be readily derived from the data set of a standard UPP. Its anatomic correlate is the bladder neck and proximal urethra. PTA together with PTA/TA may be useful in describing the urethral function of patients with GSI and evaluating therapies which target the bladder neck. Further study is warranted to confirm diagnostic test validity.