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A SCALE SYSTEM TO PREDICT EXTERNAL SPHINCTER DYSFUNCTION IN MALE PATIENTS WITH VOIDING DYSFUNCTION REFRACTORY TO A-BLOCKER

<u>Hypothesis / aims of study</u>
Poor relaxation of external urethral sphincter (PRES) played an important role in male patients with voiding dysfunction. However, the understanding is paucity. This study aimed to elucidate the difference of PRES between other male voiding dysfunction on video-urodynamic study, and tried to establish a simple scale system to predict the PRES.

<u>Study design, materials and methods</u>
We retrospectively reviewed the medical charts and video-urodynamic study reports of patients diagnosed as voiding dysfunction in a single medical center. All patients were arranged for VUDS due to refractory voiding dysfunction after α-blocker treatment.

Total 2078 patients were included in this study. Patients' general characteristic factors and video-urodynamic parameters were analysed to compare the differences between PRES and non-PRES (including benign prostate obstruction and bladder neck dysfunction) group. A scale system consists of voiding volume, total prostate volume, and transitional zone index, each item ranging from 0 to 2 scores was also calculated for all patients. Receiver operating characteristic curve was used to evaluate the predictive ability.

<u>Results</u>
Among the total 2078 patients, there were 487, 624, and 905 patients in PRES, BND, and BPO groups respectively, while 62 patients suffered from urethral stricture. In univariate analysis, age, peak flowrate, voiding volume, post voiding residual urine, total capacity, total prostate volume, and transitional zone index were significant different in PRES and non-PRES group. Only voiding volume and total prostate volume remained significant different at multi-variate analysis. The scale system had an area under curve of 0.767 at ROC. Using cut-off point 0 and 6 could have sensitivity and specificity 12.7%/98.5% and 90.3%/43.2% respectively.

<u>Interpretation of results</u>
Since the PRES patients are so different from non-PRES patients in some clinical parameters, we could use the parameters to establish a simple scale system. With appropriate cut-off point, the system could predict the PRES patients from non-PRES patients with high specificity. The system could help those patients who were not indicated for urodynamic study or if urodynamic study was not available, and to avoid misdiagnosis or unnecessary treatments.

<u>Concluding message</u>
External sphincter played an important role in patients with voiding dysfunction refractory to α-blocker. Scale system consists with voiding volume, total prostate volume, and transitional zone index could help clinicians to predict external sphincter dysfunction in a simple way.

<u>Disclosures</u>
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