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Title (type in CAPITAL LETTERS leave one blank line before the text)	PREDICTABILITY OF SUCCESS WITH PREOPERATIVE URODYNAMIC EVALUATION OF BLADDER OUTLET COMPETENCE IN ANTI-INCONTINENCE PRECEDURE IN THE CHILD WITH MYELOYDYSPLASIA
<b><u>Aims of study</u></b>	Preoperative urodynamic evaluation for bladder outlet competence with urethral profilometry and valsalva leak point pressure (VLPP) measurement has been thought as valuable tool for predicting postoperative success in terms of continence. Surgeon must decide preoperatively whether he/she will perform augmentation cystoplasty only or augmentation cystoplasty with additional operation for strengthening of bladder outlet. We studied the above parameters in the myelodysplastic children who had received operation for achieving continence and wanted to know the predictability of those in the success rate of the operation retrospectively.
<b><u>Methods</u></b>	Twenty-four urinary incontinent myelodysplastic patients (M, F 15/9) underwent augmentation cystoplasty (using ileum in 20 patients, stomach in 4) with and without bladder outlet operation. The mean age at operation was 10 year and 10 months old (5 yr 11 mo – 11 yr 1 mo.). All the patients had been in daytime diaper state preoperatively despite CIC and anticholinergic medication. Mean postoperative follow-up period was 2 year and 3 months (2 mo - 6 yr 3 mo). Ten patients received bladder neck plasty (sling procedure in 8 males and 1 female, modified Salle procedure in 1 male). One female patient had bladder neck closure (BNC) primarily. All patients received preoperative video-urodynamic study (video UDS) focusing on check for bladder outlet competence. Hyperreflexia was found in 17 patients and areflexia in 7. Maximum urethral closure pressure (MUCP) was measured at empty state. VLPP was checked at the half of maximum cystometric capacity (MCC). Success of operation was judged when the patients had daytime and nighttime continence without diaper postoperatively.
<b><u>Results</u></b>	In the patients who underwent augmentation only, success rate was 12/14. Preoperative UDS (preop UDS) showed areflexia in five patients in this operation group. MUCP showed 30 to 40 cmH <sub>2</sub> O in 6 patients, 41 to 82 cmH <sub>2</sub> O in 8. One failed patient with ileocystoplasty who showed hyperreflexia had 82 cmH <sub>2</sub> O of MUCP and 60 cmH <sub>2</sub> O of VLPP. Postop UDS showed 40 cmH <sub>2</sub> O of MUCP in this patient. The other failed female patient with gastrocystoplasty received the second bladder augmentation with ileum and sling procedure with rectus fascia (MUCP 40 cmH <sub>2</sub> O in preop UDS) for continence.

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Among the patients who received sling procedure with rectus fascia, including the above one female patient, the success rate was 6/9. One patient showed areflexia in this operation group. Three failed male patients showed hyperreflexia, who had 17, 28, 50 cmH<sub>2</sub>O of MUCP and 34, 100 cmH<sub>2</sub>O of VLPP respectively (in the third patient VLPP had not been checked preoperatively but he showed areflexia with 35 cmH<sub>2</sub>O of MUCP in postop UDS). The first and the third patient ultimately received BNC. Interestingly the second patient showed 30 cmH<sub>2</sub>O of MUCP and 38 cmH<sub>2</sub>O of VLPP in UDS 20 months later postoperatively. In the six successful patients with sling, preop MUCP showed 36 to 40 cmH<sub>2</sub>O in 5 patients and 60 cmH<sub>2</sub>O in one patient preoperatively but preop VLPP was checked in only one patient who showed 36 cmH<sub>2</sub>O of MUCP and 40 cmH<sub>2</sub>O of VLPP. Besides the above two groups, one patient who primarily received BNC and Mitrofanoff procedure had had 25 cmH<sub>2</sub>O of MUCP and 20 cmH<sub>2</sub>O of VLPP in preop UDS. And another one patient who underwent modified Salle procedure had had 55 cmH<sub>2</sub>O of MUCP and 100 cmH<sub>2</sub>O of VLPP. Nine patients also received Malone procedure for bowel problem. At present 22 patients do not need diaper during daytime and nighttime. Two patients showing adequate CMC and compliance in postop UDS without undergone secondary operation are still wearing diaper all day long for urinary incontinence.

#### **Conclusions**

From the above data we think that MUCP and VLPP in preop UDS are useful parameters for predicting successful results of operation concerning bladder outlet competence in the incontinent myelodysplastic patients. However, we cannot completely rule out the possibility of falsely assessing of bladder outlet competence with preoperative MUCP and VLPP, especially in the patients with hyperreflexia, because the measured values may be changed after augmentation in which the bladder became in areflexic state. Sling procedure seems to be effective for anti-incontinence procedure, but we think that it may not be indicated in the patient with too low MUCP and VLPP.

#### **References**

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