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FEMALE ORTHOTOPIC BLADDER SUBSTITUTION: CHANGES IN URETHRAL PRESSURE PROFILE MAY AFFECT FUNCTIONAL RESULTS

Hypothesis / aims of study

To evaluate whether functional results in female orthotopic bladder substitution are associated with changes in urethral pressure profile.

Study design, materials and methods

Both pre- and postoperative urethral pressure profiles were available in 26 women who underwent radical cystectomy and ileal orthotopic bladder substitution for bladder (n=25) or recurrent cervical (n=1) cancer. Patients were dichotomized into those with optimal (complete emptying [post void residual <50mL] and urinary continence [use of at most one pad for safety reasons]) and suboptimal (incomplete emptying [post void residual ≥50mL], urinary incontinence [>1 pad] or both) functional results after ileal orthotopic bladder substitution.

Results

Of the 26 women, 12 (46%) had optimal and 14 (56%) suboptimal functional results after ileal orthotopic bladder substitution. Median age (65 versus 63 years, p=0.25) and median time upon postoperative urethral pressure measurement (1 year in both groups, p=0.74) were similar in both groups. Postoperatively, in women with optimal and suboptimal functional results, mean functional profile length decreased from 31 to 27 mm and 32 to 26 mm, and mean maximum urethral closure pressure from 50 to 38 cmH_2O and 52 to 34 cmH_2O, respectively. The decreases in functional profile length and in maximum urethral closure pressure were not significant in women with optimal functional results (mean decrease 4mm, 95% CI -2 to 9mm, p=0.14 and mean decrease of 12cmH_2O, 95% CI -3 to 28, p=0.11, respectively) but the decreases were significant in those with suboptimal results (mean decrease 6mm, 95% confidence interval (CI) 3 to 9 mm, p=0.002 and mean decrease 18cmH_2O, 95% CI 11 to 25 cmH_2O, p<0.001, respectively).

Interpretation of results

Women with optimal functional results after orthotopic bladder substitution do not show a significant difference in functional profile length of maximal urethral closing pressure before and after surgery. In contrast, in women with suboptimal results a significant decrease on both parameters is observed.

Concluding message

Women with optimal functional results after orthotopic bladder substitution had less pronounced postoperative decreases of functional profile length and maximum urethral closure pressure than those with suboptimal results. Thus, preservation of urethral function may be an important factor influencing outcome after female orthotopic bladder substitution.

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**not applicable at our institution**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**