

URODYNAMIC FEATURES OF HAUTMANN ORTHOTOPIC ILEAL NEOBLADDER USING STANDARD AND AMBULATORY URODYNAMICS. PRELIMINARY RESULTS

Hypothesis / aims of study

To present our preliminary functional outcomes and urodynamic results of the "W" ileal neobladder by using either standard and ambulatory urodynamics.

Study design, materials and methods

A cohort of 14 patients (13 men and 1 woman) who received an orthotopic "W" ileal substitution of their bladder after radical cystectomy are enrolled into this study. Operations were performed between 2002 and 2008 and the time from surgery to urodynamic investigation ranged from 1 to 6 years. All patients after completing an ICIQ-UI (Short form) questionnaire were subjected to conventional urodynamics (pressure flow study) and then to ambulatory urodynamics for an approximately 18 hour record of their voiding patterns and habits.

Results

The mean duration to postoperative urodynamic study was 29 months

(range 1-6 years) and the mean age of the patients was 62,8 (range 47-79 years).

5 patients were continent by day and night, while 5 patients who were continent at the standard evaluation proved to be incontinent using the ambulatory method. The average leakage report was 6 times during an ambulatory recording of 18 hours. Mean nighttime voiding rate was 2 for each patient. Bladder compliance was normal in 11 patients (above 39 ml/cmH₂O) while at the remaining three it was below 13 ml/cmH₂O. These patients were incontinent both during the standard and the ambulatory recording. Post voiding residual was from 0 to 323 ml regardless initial bladder filling but in accordance to maximum flow rate: High flow rate patients emptied their bladder without residual volume. High post voiding residual volume was found in three patients with urethral strictures. Maximum flow rates achieved during ambulatory recording were 1.5fold higher than those accomplished with the standard urodynamics (6ml/sec and 9 ml/sec respectively). Mean cystometric capacity was 520 ml, average and maximal pouch pressure were 31 and 44.5 cmH₂O respectively, maximal bladder capacity 1100 ml, minimal bladder capacity 111ml (standard urodynamics). Mean pouch pressure during ambulatory urodynamics was approximately 2fold lower than standard urodynamic evaluation.

Interpretation of results

Ambulatory urodynamics is a useful tool in order to prove patients' continence status. It is also better than standard urodynamics in showing uroflowmetry parameters because voiding is accomplished under privacy circumstances. On the other hand the use of a validated questionnaire for urinary incontinence together with conventional urodynamics are adequate for the initial evaluation of an orthotopic "W" neobladder and ambulatory monitoring must be the last resort when the results of standard pressure flow study are ambiguous.

Concluding message

Orthotopic "W" ileal neobladder offers good functional results (similar storage function to normal bladder) in those patients who trained to use their new bladder appropriately by avoiding bladder overdistention and voiding in regular intervals

References

1. Gungor Marim, Kaan Bal, Ugur Balci, Gengiz Girgin, Cetin Dincel (2008) Long term urodynamic and functional analysis of orthotopic "W" ileal neobladder following radical cystectomy. Int Urol Nephrol 40:629-636
2. Ernst van Waalwijk van Doorn, Kate Anders, Vik Khullar, Sigurd Kulseng-Hanssen, Francesco Pesce, Andrew Robertson, Derek Rosario, Werner Schafer

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Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	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	It refers to management of daily clinical practice of patients who subjected to urodynamic evaluation during regular follow up
Was the Declaration of Helsinki followed?	Yes

Was informed consent obtained from the patients?

Yes
