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HOW DOES THE NEOBLADDER WORK IN WOMEN? A MULTICENTRIC SURVEY

Hypothesis / aims of study

We report functional results in ileal orthotopic neobladders (NB) in women, through a multicentric survey. Data about sexuality and rectal function are also reported.

Study design, materials and methods

The data were retrospectively collected from 68 patients files of 17 Urology Units

Results

From 1996 to 2009 NBs were performed after cystectomy – because of bladder cancer in 90% of cases with bilateral nerve-sparing (Spar) in 12% of pts - at the average age of 60 years (range 35-78).

Before surgery 13% of pts had a positive stress-test, 15% pelvic floor hypotonia, 4.4% symptomatic genital prolapse; the urogynaecological evaluation was either incomplete or not available in 30% of cases. Eight pts had previously undergone hysteroneussiectionomy.

In 75% of cases the NB performed was the Paduan Ileal one (VIP) whereas in 19% the Studer technique was used. In 10 pts ovaries were saved and in 6 of them the uterus too.

The urethro-ileal anastomosis was stabilized in 15 pts (22%) with an omental flap and reconstruction of the endopelvic fascia. Simultaneous urethropexy was performed in 4 pts (6.5%) and sacral colpopexy in 1. A complete follow-up of 48±40 months (range 6-140) is available in 54 cases, a partial follow-up is available in 8 cases and 6 pts were completely lost at the follow-up (with 2 early deaths from neoplastic progression).

In 62 NBs, including 2 early replacements of indwelling catheter for complete urinary retention (UR), we observed the following functional results: urinary incontinence (UI) in 37%, normal function in 21%, UR+UI in 19%, complete UR in 15% and incomplete UR in 8%. The UI was mainly the stress type (81%). Obstructive UR was found in 4.8% of cases, due to pouchcele in 2 pts and to herniation of the NB in laparocoele in 1 pt.

Death from progression of tumor took place in 11 cases (16%) at an average time of 31±21 (4-74) months from NB.

QoL: mean scores obtained with VAS “1 not satisfied at all > 5 very satisfied with NB”		ANCILLARY OPERATIONS 61 pts	
UI	2,8	Functional operations	
Complete UR	3,0	Urethropexy	2
UR+ UI	3,2	Anterior colpoplasty	1
Incomplete UR	3,8	Urethral injection bulking agents	1
Normal	4,2		6.5%
Average	3,3±1.2	2 pts refused urethropexy	
OTHER DATA 60 pts		Other operations	
Monolateral anastomotic uretere-ileal stricture	2 (3%)	Endoscopic NB litotrixy	1
Urethra		Fistulectomy	1
Recurrence	3 (5%) average 52±38 months later	Laparoplasty	1
NB		Bilateral ureteroileocutaneostomy	1
Kinking	1 case (1.5%)	Monolateral nephroureterectomy	1
Pouchcele	2 cases (3%)	Urethrectomy +Mitrofanoff reservoir	1

VOIDING DIARIES 59 pts

Mean voided volume 249±126cc (0-600)
Max NB capacity < 400 cc 66%
 > 400 cc 34%
Daytime frequency 0-1 times 14%
 2-6 times 40%
 >6 times 46%
Night-time frequency 0 23%
 1-2 52%
 3 or > 25%
CIC¹/die None 62%
 max 2 6%
 3-5 22%
 > 5 10%
Daytime UI* 63% 3 o 2 pads/die 32 %
 3 or more pads/die 46%
Nocturnal UI 63% Pads 47% Drops 17%
 *84% complains also of nocturnal UI

URODYNAMICS 40 pts at average 20 months post-NB (range 4-116)

Max cystometric capacity 422 ±126 ml (range 37-700)

Compliance Reduced 8% Normal-increased 92%

Ileal activity 37% ; mean value 33 ±10 cm H2O (20-50)

Ileal overactivity (causing 5 vesico-ureteric reflux + 1 UI) 15%

Monolateral vesico-ureteric reflux 13%

¹ clean intermittent catheterisation

DEFECATION/SEX 61 pts

Bowel function Regular 75%
 Diarrhea 3%
 Constipation 22%

SEXUALLY ACTIVE 16 pts (27%)

Genital sensitivity 94% Missing 6%

Lubrication present 56%
 reduced 38%
 missing 6%

Orgasm present 52%
 reduced 25%
 missing 13%

All the pts with pre-surgery positive stress-test undergo anti-UI operations. Fifty% of pts with pelvic floor hypotonia developed UI, whereas those with perineal normotony had UI in 23% of cases.

Incomplete UR seems more common in Studer than in the VIP NB (20%-6.3%), instead UR+UI seems to regard more the VIP (23%) than the Studer NB (10%).

Normofunction of the NB was detected in 37% of the Spar group against 19% of the no-Spar group, but UR was also present in 37% of the Spar pts.

Constipation, reported by 25% of the no-Spar group, was absent in the Spar pts. As regards sexuality 30% of the no-Spar group is sex-active (half of them with ovaries); only 1/8 pts who underwent the Spar is sex-active.

None of these data resulted statistically significant.

Interpretation of results

NB should be the first choice for urinary diversion in women for the positive impact on body image. Notwithstanding this, only 3 units have performed at least 10 NBs in 13 years.

The pre-operative lack of information on the vaginal profile was relevant (30%) and it could explain the need of ancillary treatments for fascial defects in 10% of cases.

QoL is mostly affected by UI followed by complete UR and UR+UI.

The 27% of the sample is sex-active and most of them didn't undergo the Spar.

The rectal function is normal in all the pts who underwent the Spar and constipation is present in 25% of the others.

Concluding message

Normofunction of the NB is low in our survey (21%). Perhaps the high percentage of UI – reported alone in 37% of cases and mixed with UR in 19% - could be reduced with a careful pre-operative evaluation of the vaginal profile and with the simultaneous correction of all the fascial defects so common in females pts.

References

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