159

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A SEVERITY GRADING OF HISTORY VOIDING DISORDERS ACCORDING TO ICS DEFINITIONS: ITS CORRELATION WITH ROUTINE URODYNAMIC PARAMETERS IN WOMEN WITHOUT AND WITH PREVIOUS GYNAECOLOGIC AND ANTI-INCONTINENCE SURGERY.

Aims of Study

To correlate the grading of severity of history of voiding disorders with routine micturition urodynamic parameters, according to the absence or the presence of previous hysterectomy or anti-incontinence surgery.

Methods

History data's of women investigated pre-operatively for urine stress or mixed incontinence were analyzed according to the following classification:
- group 1 : no voiding complaints
- group 2 : feeling of weak or prolonged urinary stream.
-group 3 : reduction to start or complete voiding

Following parameters were determined and compared in group 2 and 3 women to group 1 women: post-voiding residual amount of urine (PVR), prevalence of women with PVR amount of urine >100 ml, prevalence of interrupted flow pattern during free flowmetry, maximum flow rate (MFR), intra-vesical pressure at maximum flow rate.

These parameters were determined in three groups of women : - a group of women without any previous gynecologic operations
- a group of women with previous vaginal or abdominal hysterectomy.
- a group of women with previous anti-incontinence surgery.

Results

In women without any previous surgery (Table I):

- the median PVR volume, the prevalence of PVR amount of urine >100 ml and the prevalence of women with interrupted flow pattern are significantly higher in group 3 women, whereas MFR and intra-vesical pressure during MFR values are the same in the three groups.

Table I

	Group 1 (N: 524)	Group 2 (N: 172)	Group 3 (N: 143)	P gr. 1 – gr. 2	P gr .1 – gr.3
Median PVR volume (ml)	50±84	55±75	121±157	0.7	0.001
Prevalence of women with PVR urine > 100 ml	10 % (55)	10 % (17)	26 % (38)	1	<0.001
Interrupted flow	22 % (118)	24 % (42)	42 % (60)	0.6	0.0001
MFR (ml/s)	28 ± 31	33 ± 77	22 ± 15	0.2	0.1
Intra-vesical pressure at MFR (cmH2O)	44 ± 39	43 ± 36	52 ± 48	0.6	0.09

In women with previous hysterectomy (Table II):

- the median PVR volume, the prevalence of women with PVR amount of urine >100 ml and with interrupted flow pattern are significantly higher in group 3 women, whereas MFR and intra-vesical pressure during MFR values are the same in the three groups. Median PVR volume are also significantly higher in group 2 women.

Table II

	Group 1 (N: 177)	Group 2 (N: 54)	Group 3 (N: 49)	P gr. 1 – gr. 2	P gr .1 – gr.3
Median PVR volume (ml)	42±90	93±131	125±194	0.009	0.0006
Prevalence of women with PVR urine > 100 ml	8 % (15)	15 % (8)	27 % (13)	0.3	0.002
Interrupted flow	15 % (26)	26 % (14)	35 % (17)	0.07	0.003
MFR (ml/s)	39±75	54±130	25±18	0.4	0.3
Intra-vesical pressure at MFR (cmH2O)	45±42	41±28	50±30	0.5	0.6

In women with previous anti-incontinence surgery (Table III):
- the median PVR volume, the prevalence of women with PVR amount of urine >100 ml and with interrupted flow patterns are significantly higher in group 3 women, whereas MFR and intra-vesical pressure during MFR values are significantly decreased in group 3 women compared to group 1 women.

Table III

	Group 1 (N: 140)	Group 2 (N: 74)	Group 3 (N: 52)	P gr. 1 – gr. 2	P gr .1 – gr.3
Median PVR volume (ml)	50±85	55±75	121±157	0.7	0.001
Prevalence of women with PVR urine > 100 ml	12 % (17)	18 % (13)	27 % (14)	0.3	0.002
Interrupted flow	23 % (32)	23 % (17)	38 % (23)	0.9	0.0007
MFR (ml/s)	29±23	25±40	14±7	0.4	< 0.0001
Intra-vesical pressure at MFR (cmH2O)	40±24	31±25	54±31	0.05	0.004

Conclusions

Women with history of reduction to start or complete voiding have significantly higher PVR volumes, interrupted flow patterns than women with no voiding complaints or women with feeling of weak or prolonged urinary stream . These findings are present in women without previous operation and after previous hysterectomy . In group 3 women with previous anti-incontinence surgery, a significant decreased MFR and increased intra-vesical pressure during MFR is also present.

10 % of women without any voiding and previous surgery history have PVR of >100 ml and 22% of them have free flowmetry curves with interrupted flow patterns.

A careful history, with special attention to complaints of reduction to start or complete voiding, completed with urodynamic voiding investigation should be done before any first or new anti-incontinence surgery for avoiding further potentially disastrous post-operative voiding disorders.