#643 PELVIC FLOOR MUSCLE FUNCTION IN WOMEN QUALIFIED FOR SURGICAL TREATMENT OF PELVIC ORGAN PROLAPSE AND STRESS URINARY INCONTINENCE- INITIAL FINDINGS

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Introduction

Pelvic organ prolapse (POP) and stress urinary incontinence (SUI) are common problems that significantly affect women's lives. Pathophysiology of these conditions is usually multifactorial and pelvic floor muscles (PFMs) dysfunction is one of the main contributing factors [1].

The aim of this study was to assess PFMs function in women qualified for surgical treatment of POP and SUI and to evaluate the relationship between the pre-operative PFMs function and quality of life.

Methodology

166 women mean age 56.6±12.1 (range 30 – 84) qualified for surgical treatment of POP (n=106) and SUI (n=60) were included in this study.

PFMs function:

- Palpation examination (quality and correctness of contraction);
- Manometry: vaginal resting pressure (as a measure of PFMs tone), vaginal squeeze pressure (as a measure of strength), area under the curve (as a measure of endurance).

Quality of life:
Pelvic Floor Distress Inventory (PFDI-20) which comprised the Pelvic Organ Prolapse Distress Inventory 6 (POPDI-6), the Colorectal-Anal Distress Inventory 8 (CRAD-8), and the Urinary Distress Inventory 6 (UDI-6).

All measurements were performed during the hospital admission, before surgical treatment. The correlation between variables was assessed using the Spearman correlation coefficient.
Values of $p<0.05$ were considered statistically significant.

Results

89.2% (n=148) of women were able to voluntarily contract PFMs, but only 34.5% (n=51) did it correctly (in isolation and without breath-holding).

The median vaginal resting pressure was significantly higher in women qualified for SUI surgery (32.20 cm H_2O) than those awaiting POP intervention (24.25 cm H_2O, $p<0.01$). There were no significant differences in other PFMs measurements between the groups.

Vaginal resting pressure was negatively correlated with POPDI-6 (r_s =-0.224, p=0.01) and CRADI-8 (r_s =-0.213, p=0.01), and positively correlated UDI-6 score (r_s =0.172, p=0.04).

Conclusion

Women qualified for pelvic floor surgery seem to have low conscious control over their PFMs therefore, future research should investigate whether this could impact surgical treatment success.

Given our results regarding vaginal resting pressure further reflections on differences in muscle tone between women undergoing SUI and POP surgery, and whether PFM muscle tone should be addressed in pre-operative rehabilitation are warranted.

Table 1. Differences between groups in results of manometry and palpation examinations.

		POP group	SUI group	p-value
Vaginal resting pressure, median (IQR)		24.25 (6.80)	32.20 (13.20)	**<0.01**
Strength: Vaginal squeeze pressure, median (IQR)		11.90 (14.16)	15.93 (13.40)	0.14
Endurance: Area under the curve, median (IQR)		886.80 (1411.80)	1238.50 (992.30)	0.13
Correct activation, yes, n (%)		33 (33.00)	19 (33.33)	0.97
Voluntary relaxation,	**yes, n (%)**	77 (78.57)	44 (77.19)	0.09
	partial/delayed relaxation, n (%)	12 (12.24)	12 (21.05)	
	no, n (%)	9 (9.18)	1 (1.75)	
Reflexive activation of PFMs, yes, n (%)		25 (25.00)	17 (29.82)	0.51

Table 2. Values of selected Spearman correlation coefficient (r_s).

	PFDI 20	POPDI-6	CRADI-8	UDI-6
Vaginal resting pressure	-0.091	-0.224 **p=0.01**	-0.213 **p=0.01**	0.172 **p=0.04**
Strength: Vaginal squeeze pressure	-0.011	-0.013	-0.044	0.040
Endurance: Area under the curve	0.097	-0.088	0.111	0.131

References

1. Hallock JL. Handa VL. The Epidemiology of Pelvic Floor Disorders and Childbirth: An Update. Obstet Gynecol Clin North Am. 2016 Mar;43(1):1-13