

## SEXUAL ACTIVITY: RELATION TO PELVIC ORGAN PROLAPSE IN WOMEN WITH URINARY INCONTINENCE.

### Hypothesis / aims of study

The aim of the study was to explore differences in clinical characteristics of sexually active and inactive women with stress, urge and mixed urinary incontinence presenting to an urogynecology ambulatory department; the analysis of pelvic organ prolapse and coital incontinence in those subjects.

### Study design, materials and methods

A cross-sectional study was conducted in a group of 417 consecutive women who attended an urogynecology ambulatory department with lower urinary tract symptoms (LUTS). Medical history was taken, urogynecological and urodynamic examination were performed according to the standards of the International Continence Society. The degree of prolapse was assessed using the pelvic organ prolapse quantification (POP-Q). Patients were asked about their sexual activity and coital incontinence. Data from the medical history and urogynecological examination were compared. A detailed analysis was performed in particular POP-Q points.

### Results

Out of 417 women with LUTS - 316 (75.8%) were diagnosed with stress urinary incontinence (SUI), 37 (8.9%) with mixed urinary incontinence (MUI), and 33 (7.9%) with urge urinary incontinence (UUI), 22 (5.3%) were continent, 9 (2.2%) had other types of incontinence e.g.: fistula, overflow incontinence. A total of 386 patients with stress, urge or mixed urinary incontinence was recruited for the study. Sexual activity reported 320 (82.9%) subjects, and 63 (16.3%) described themselves as sexually inactive. In comparison with sexually inactive subjects, sexually active UI patients were younger (mean age  $52.7 \pm 9.7$  vs.  $64.0 \pm 10.2$ ,  $p < 0.01$ ), and were more likely to be before menopause 195 (60.9%) vs. 58 (92.1%) respectively,  $p < 0.001$ . Sexually active women had higher parity  $2.33 \pm 1.12$  vs.  $2.02 \pm 1.01$ ,  $p = 0.03$ . Both groups did not differ in types of UI, body mass index, and a history of previous surgery (Table 1).

Among UI women, sexually active subjects significantly more often had II stage of POP-Q than sexually inactive patients 227 (70.9%) vs. 33 (52.4%) respectively,  $p = 0.02$ ; and less frequently POP-Q  $\leq$  I 24 (25.0%) vs. 80 (38.1%), respectively,  $p = 0.01$ . After analyzing particular points of POP-Q: Aa and Ba were significantly lower in sexually active patients  $-1.03 \pm 1.12$  vs.  $-1.56 \pm 1.17$ ,  $p = 0.001$  and  $-2.75 \pm 2.19$  vs.  $-3.27 \pm 2.68$ ,  $p = 0.01$ , respectively. Genital hiatus length (GH) was significantly bigger in sexually active women ( $4.15 \pm 1.20$  vs.  $3.62 \pm 1.37$ ,  $p = 0.001$ ) (Table 2).

Among sexually active patients 191 (59.7%) reported coital incontinence: 161 (60.7%) women with SUI, 20 (74.1%) of MUI women, and 10 (35.7%) of UUI women.

### Interpretation of results

In a group of women with UI seeking medical help 82.9% was sexually active. They were significantly younger and more often before menopause. The most prevalent stage of prolapse was POP-Q II. Among those patients, lower position of points Aa and Ba, and longer GH was observed. Other points of the POP-Q did not vary between sexually active and inactive subjects. The mean maximal descent point did not differ between the groups.

### Concluding message

Among women seeking medical help due to LUTS, the percentage of sexually active women is very high. The findings concerning particular points of POP-Q should be considered, especially when surgery planning. In our study group, sexually active women with UI had a significantly lower position of anterior vaginal wall and longer GH compared to inactive subjects.

**Table 1** Characteristics of the study population

Variables	Sexually inactive (n=63)	Sexually active (n=320)	p value
Age (years) Mean ± SD	64.0±10.2	52.7±9.7	<0.001 <sup>b</sup>
BMI (kg/m <sup>2</sup> ) Mean ± SD	27.4±5.0	27.1±4.9	0.622 <sup>b</sup>
Postmenopausal n (%)	58 (92.1%)	195 (60.9%)	<0.001 <sup>a</sup>
Type of UI* SUI (n=316) MUI (n=37) UUI (n=33)	49 (77.8%) 10 (15.9%) 4 (6.3%)	265 (82.8%) 27 (8.4%) 28 (8.7%)	0.170 <sup>a</sup>
POP-Q stage 0 n (%) I n (%) II n (%) III n (%) IV n (%)	9 (14.3%) 15 (23.8%) 33 (52.4%) 6 (9.5%) -	32 (10.0%) 48 (15.0%) 227 (70.9%) 13 (4.1%) -	0.02 <sup>a</sup>
POP-Q stage Mean ± SD	1.57±0.85	1.69±0.70	0.211 <sup>b</sup>
Parity Mean ± SD (median)	2.02±1.01 (2)	2.33±1.12 (2)	0.03 <sup>b</sup>
Abdominal hysterectomy n (%)	8 (12.9%)	42 (13.5%)	0.899 <sup>a</sup>
Anterior repair or vaginal hysterectomy n (%)	6 (9.7%)	33 (10.6%)	0.826 <sup>a</sup>

a Chi-square test, b Mann-Whitney U test, c Student's t-test

\* 3 women did not provide information about their sexual activity

**Table 2** Position of the points of the POP-Q compared between sexually active and inactive women with urinary incontinence

POP-Q point (cm)	Sexually inactive (n=63)	Sexually active (n=320)	p value for Mann-Whitney U test
Aa	-1.56±1.17	-1.03±1.12	0.001
Ba	-3.27±2.68	-2.75±2.19	0.014
C	-7.52±3.71	-7.58±3.01	0.406
D	-9.32±3.32	-9.41±2.55	0.572
Ap	-2.02±1.23	-1.99±1.06	0.520
Bp	-4.55±2.08	-4.59±1.58	0.427
Total vaginal length	11.53±1.05	11.57±0.94	0.887
Genital hiatus	3.62±1.37	4.15±1.20	0.001
Perineal body	3.60±1.0	3.62±1.01	0.787
Mean maximal descent	-0.35±1.83	-0.41±1.19	0.403

Data presented as mean ± standard deviation

#### Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Local Ethics Committee - Independent Bioethics Commission for Research, Medical University of Gdansk, Poland **Helsinki:** Yes **Informed Consent:** Yes