

## IS THERE ANY DIFFERENCE IN THE PELVIC FLOOR MUSCLE ASSESSMENT IN OVERACTIVE BLADDER WOMEN WHEN COMPARED WITH HEALTHY WOMEN?

### Hypothesis / aims of study

The causes of overactive bladder (OAB) are unknown and different theories are postulated in an attempt to understand it. Some authors believe that OAB is caused by disturbance in nerves, urothelium and smooth muscles, while others believe that pelvic floor muscles (PFM) may play an important role in the development of OAB in children, when they learn to postpone micturition using PFM instead of central control mechanism, and adults, when working professions that allow them little time for voiding cause the development of strategies to postpone voiding and lead to a dysfunctional voiding pattern (1).

Although the evidences that PFM dysfunction have an important role in the pathophysiology of OAB, little is known about PFM function of women with OAB symptoms. The aim of the present study was to evaluate PFM function in women with OAB and compare the results with healthy women.

### Study design, materials and methods

Five women with OAB symptoms and seven healthy women were assessed in this transversal study. Participants were excluded if they had story of stress urinary incontinence, were pregnant, had undergone previous gynaecologic surgery, had undergone a caesarean section or vaginal delivery within the previous 12 months, had pelvic organ prolapse greater than stage I on POP-Q examination, had urinary tract infection or were in menopause.

PFM function was assessed according to the PERFECT scheme, recorded variables included power (P), endurance (E), repetitions (R), and number of Fast contractions. PFM tone, the flexibility of the vaginal opening and the ability to relax the PFMs after contraction were evaluated using digital palpation.

Data analysis: Due to the lack of normal distribution of the variables a Mann-Whitney test was employed to compare baseline and assessment measures between the two groups. A p-value of 0.05 was considered significant.

### Results

There were no significant differences between groups in the following variables: age (p=0,41), number of kids (p=0,15), body mass index (p=0,46), PFM tone (p=0,87), flexibility of the vaginal opening (p=0,40), ability to relax PFM (p=0,43) and in P (p=0,37), R (p=0,12), F (p=0,14) of PERFECT scheme. Just the variable E (p>0,01) of PERFECT scheme showed significant difference between groups. Table I shows the median and range values of PERFECT SCHEME assessment.

**Table I** – Median and range values of the PERFECT scheme assessment. OAB – Overactive bladder.

Variables	OAB Group	Control Group	p-value
<b>Power</b>	3 (2-4)	3 (3-4)	p=0,37
<b>Endurance</b>	5 (3-5)	10 (4-10)	p<0,01*
<b>Repetition</b>	4 (2-5)	4 (2-10)	P=0,12
<b>Fast Contractions</b>	7 (4-7)	6 (5-10)	P=0,14

\* Statistically significant difference after the treatment.

### Interpretation of results

The integral theory for female incontinence assumes that stress urinary incontinence and urge symptoms are derived from anatomical defects such as lax vagina that leads to defects in supporting structures (2). A study that investigated PFM function in healthy women and women with stress, urge and mixed urinary incontinence observed that incontinent women presented weaker PFMs when compared with healthy volunteers (3).

Our study corroborates with previous findings where OAB group showed less PFM endurance than healthy women.

### Concluding message

OAB group showed significant lower Endurance on PFM assessment when compared to the healthy group.

### References

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### Disclosures

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