

RELATIONSHIP BETWEEN BLADDER OUTLET OBSTRUCTION AND PELVIC FLOOR MUSCLE FUNCTION IN WOMEN WITH NEUROGENIC BLADDER

Veloso L, B Frulani de Paula L, FM Freire M, LBM Lemos N, JBC Girão M, Plöger C

Sector of Urogynecology and Pelvic Surgery, Federal University of São Paulo, Brazil



HYPOTHESIS / AIMS OF STUDY

The aim of this study was to evaluate the correlation between the urodynamic diagnosis of bladder outlet obstruction and perineal function and presence of spasms or trigger points on the pelvic floor muscles, in women with neurogenic bladder.

STUDY DESIGN, MATERIALS AND METHODS

A retrospective descriptive study in which the files of patients with neurogenic bladder were analyzed. All patients were submitted to urodynamic evaluation and pelvic floor physiotherapy assessment. Patients diagnosed with bladder outlet obstruction, not virgins and without cognitive impairment were included in this study. Six patient files filled the criteria for inclusion into this study. During pelvic floor functional evaluation, the Oxford scale and the presence or absence of muscle spasms or trigger points were recorded. Other data analyzed were: age, obstetric history and body mass index (BMI).

RESULTS

Women's mean age was 46 years (± 15.29) and 33.3% ($n = 2$) were nulliparous, 16.7% ($n = 1$) had two pregnancies, 33.3% ($n = 2$) three pregnancies, and 16.7% ($n = 1$) 4 pregnancies. The most prevalent route of delivery was the vaginal route, in 83.3% of pregnancies, and all parous women had had at least one vaginal delivery. Mean BMI was 23.67 (± 4.08).

Average Oxford was 1.3 (± 1.2), and spasms or trigger points were found in 66.7% ($n = 4$) of the sample, during pelvic floor assessment.

The table below shows the individual variables of the sample.

Table1 – Individual variables of each patient

Patient	Age	Pregnancy	Vaginal Delivery	BMI	Oxford	Spasms/Trigger Points
1	29	0	0	27,88	0	Absent
2	56	4	4	19,28	0	Absent
3	54	3	2	23,5	2	Present
4	54	0	0	29,36	2	Present
5	59	3	2	21,08	1	Present
6	24	2	2	20,93	3	Present

The sample was heterogeneous in age, obstetric history and BMI, however these factors apparently did not cause strong impact on the incidence of pelvic floor muscle disorders.

The quality of muscle contraction of all patients evaluated was weak. This may be one of the causative factors of bladder outlet obstruction. Adequate awareness of pelvic muscles is essential and necessary not only for the correct contraction of the pelvic floor but also for its complete relaxation. However, as the perineal awareness was not a variable evaluated in the cases, we can not affirm whether the muscles were weak or if there wasn't a correct awareness for perineal contraction.

The apparently predictive factor that corroborate for the obstruction was the presence of muscle spasms or trigger points on the pelvic floor of these women. This finding suggest that the muscular component is one of the main factors contributing for bladder outlet obstruction. This muscular dysfunction may produce pain and negatively affect bladder and bowel function and sexual response. In such cases, a maintained sarcomere contraction is observed, leading not only to a local inflammatory response, but also to incomplete relaxation of the muscles affected [1]. Moreover, myofascial pelvic floor dysfunction symptoms usually include those related the pelvic viscera that are influenced by the pelvic floor functioning, such as dysfunctional or painful voiding, post-voiding bladder pain, urethral pain, hesitation or urinary urgency [2]. The presence of pelvic floor muscle tenderness and spasms may be explained by the visceromuscular reflex [3].

We concluded that the presence of spasms or trigger points was the most important factor and of highest correlation with bladder outlet obstruction, and that muscle strength in these women was not satisfactory.

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CONCLUDING MESSAGE

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