702

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THE AIM OF THIS STUDY WAS TO ASSESS PELVIC FLOOR MUSCLE (PFM) STRENGTH IN NULLIPAROUS AND PRIMIPAROUS USING SUBJECTIVE AND OBJECTIVE EVALUATION.

Hypothesis / aims of study

The assessment of pelvic floor muscle (PFM) function is important in incontinent women. Studies have reported a different forms to evaluate it (1). The PFM may suffer modifications to adjust the alterations during pregnancy, and after the delivery.
The aim of this study was to assess pelvic floor muscle (PFM) strength in nulliparous and primiparous using subjective and objective evaluation.

Study design, materials and methods

100 women with age between 20 and 30 years were prospectively studied. Participants were distributed into 2 groups: Group G1 (n = 50) composed by voluntary healthy nulliparous women without urinary complaints; Group G2 (n = 50) by primiparous women. Demographic data, such as physical activity, was obtained using clinical questionnaire. Subjective evaluation of pelvic floor muscle (PFM) was performed using transvaginal digital palpation (TDP) into 2 positions (anterior and posterior) (Fig.1 and 2). Objective evaluation of PFM strength was assessed using a portable perineometer (DM 01 Dynamed) in three different positions: in lying position with straight limbs (P1), with bent limbs (P2) and sitting (P3). These parameters were recorded at one moment in group G1 and in 20th and 36th weeks during pregnancy and after 45 days of the delivery in G2.

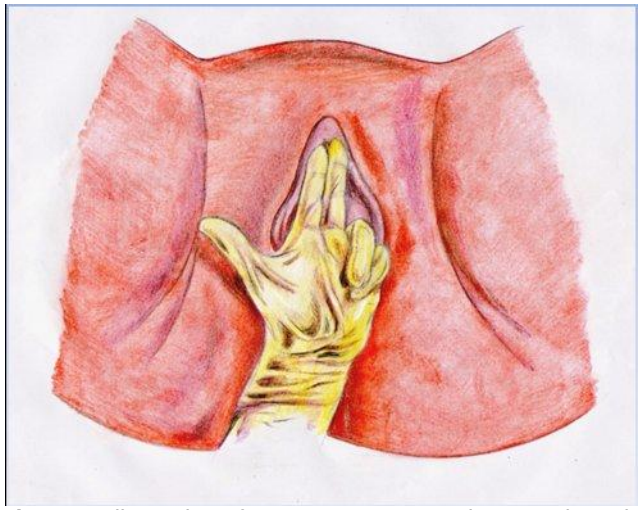

Figure 1. Illustration of PFM assessment using TDP (anterior position).

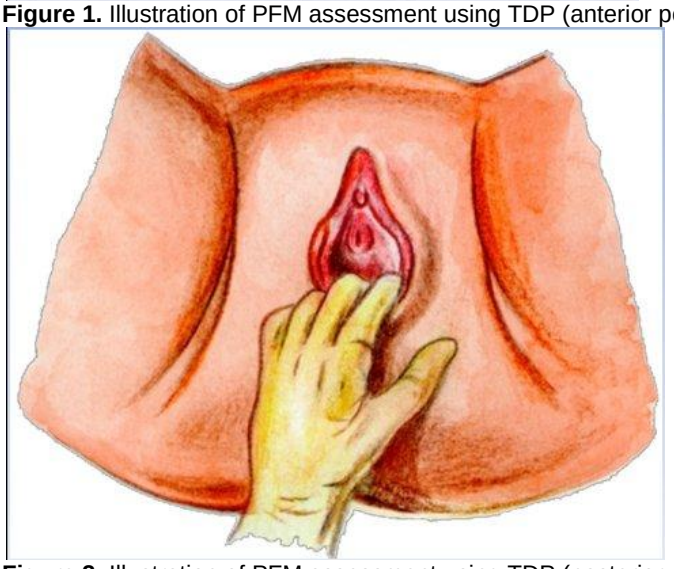

Figure 2. Illustration of PFM assessment using TDP (posterior position).

Results

In G2, 14 women were excluded due to the lost follow-up. The median of age was 23 years in G1 and 22, in G2 (p> 0.05). 84% of women in G1, and 80%, in G2, reported orgasm (p> 0.05). In G1, 54% presented intestinal constipation and 50% in G2 (p>0.05). The sexual activity was significantly higher in G2 (97%) as compared to G1 (84%). In anterior position, the TDP evaluation of PFM contraction was considered normal in 52% of nuliparous (G1),and in 39%, 22% and 25%, at 20th and 36th week of pregnancy and 45 days afer delivery, respectively, in G2. There was a significant difference between all periods of evaluation in G2 as compared to G1, except when compared 20th week of pregnancy and nuliparous (p> 0.05). In posterior position, the TDP was normal in 76% of G1, and in 67%, 36% and 44%, at 20th and 36th week of pregnancy and 45 days afer delivery, respectively, in G2. There was statistical difference between all periods of evaluation in G2 as compared to G1.In the objecive evaluation of PFM, there was no

statistical difference between both groups at differents moments, except in sitting position (P3) wich was significantly lower after 45 days of delivery (15 cm H_2O) as compared to healthy nuliparous (23 cm H_2O).

Interpretation of results

In our study observed a significant decrease of PFM strength , this data are agree of others studies that showed that the gain of weight during the pregnancy and the uterus increasing may to carry out the stretch of abdominal musculature interfering in normal function of PFM (2).

Concluding message

The subjective evaluation of PFM showed significant decrease in musculature strength during pregnancy and 45 days after delivery. In objective evaluation there was a significant decrease of PFM strength only in sitting position after 45 days of delivery.

References

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Specify source of funding or grant	**Financial Support by CNPq**
Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Comitê de Ética na Pesquisa**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**