

Vaginal palpation of pelvic floor muscle strength in continent women in different age ranges. Inter-test reproducibility.

Hypothesis / aims of study

The aim of this study is to assess the reliability and the reproducibility of subjective evaluation of pelvic floor muscle (PFM) using vaginal palpation in continent women from different age ranges.

Study design, materials and methods

150 healthy volunteer women were prospectively recruited in a single-blind study. They were divided into four different groups according to age: G1 (n=37) from 30 to 40 years; G2 (n=39) from 41 to 50 years; G3 (n=39) from 51 to 60 years; and G4 (n=35) older than 60 years. None of the patients complained about urinary incontinence or bladder dysfunction. The demographic data, such as age, number of deliveries, body mass index (BMI), physical and sexual activity, were obtained using a clinical questionnaire. The subjective assessments of the pelvic floor muscles (PFM) squeezing were performed by means of transvaginal digital palpation in the anterior and posterior area (Fig. 1 A and B).

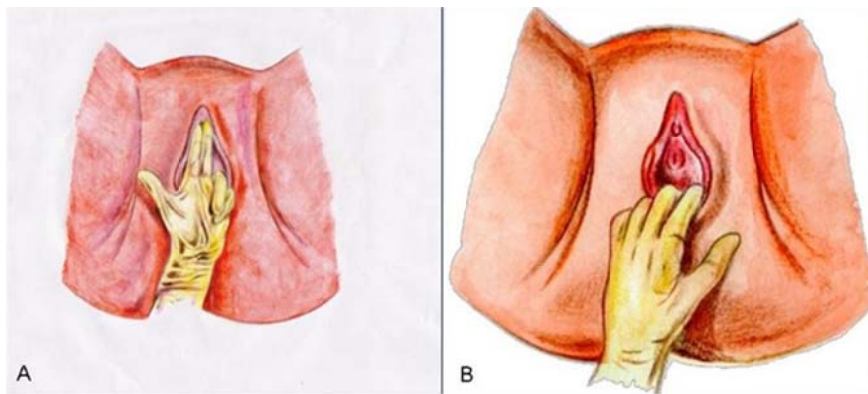


Figure 1 – Illustration of transvaginal digital palpation in anterior (A) and posterior areas in relation of vaginal introitus. The classification used has four grades, which reflect the muscle force against the examiners' fingers, as described by Amaro et al, 2003. All patients were blindly evaluated by three different physiotherapists.

Results

69.3% of the women were sexually active and 40.7% had regular physical activities. The BMI was significantly lower in G1 compared to G4 ($p < 0.05$) (Fig. 2).

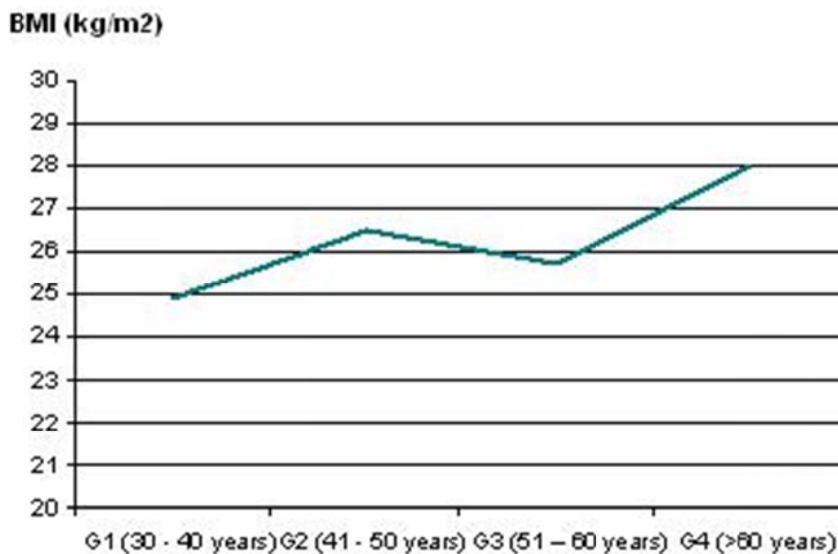


Figure 2 – Distribution of BMI in the different age ranges.

There was no significant statistical difference between the transvaginal palpation in the anterior and posterior areas. There was agreement among the physical therapists in 44.7% in the evaluation of anterior area (Fig. 3) and in the posterior, 55.3% of agreement.

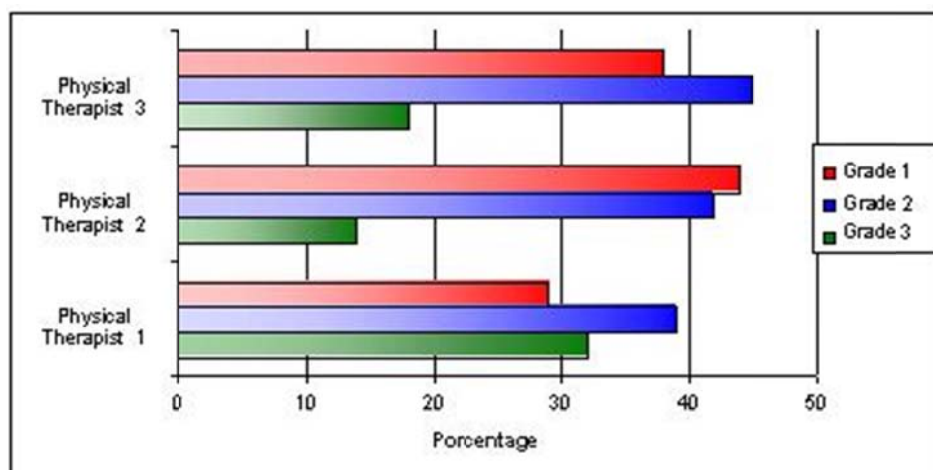


Figure 3 – Vaginal palpation of PFM strength in the anterior area for three different physical therapists.

Interpretation of results

Palpation yielding grades 3 or 5 – scale points may not have sufficient sensitivity to differentiate between individuals. Hence, reliable measurement of improvement in PFM strength may be difficult. The present results indicate that the method was reproducible in almost half of continent patients.

Concluding message

There was reproducibility in almost half of women evaluated by three different physical therapists using the transvaginal palpation of the PFM in the anterior and posterior areas.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</i>	Yes
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Ethical Research Committee of Sagrado Coração University (protocol 61/07)
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes