

ABSTRACT

The weakness and lack of perception of the perineal musculature and pelvic floor cause a series of emotional and social problems that can affect the social quality of life.

This muscular structure is responsible for maintaining the support of the internal organs and participating in the maintenance of the urinary and fecal continence, as well as allowing coitus and childbirth.

The objective of this study was evaluating the maximum pressure during the contraction of the perineal musculature and the performance of the pelvic floor muscles after using both the anatomical intravaginal device and the conventional vaginal cone.

METHODS

A double-blind, randomized, lab-controlled trial was conducted in the Engineering of Sensory-Motor Rehabilitation Laboratory, located at the Institute of Research and Development, Universidade do Vale do Paraíba-Univap.

The study began after the research project was approved by the Ethics Committee in Research (CEP) and upon the signing of the Free and Informed Consent Term by the volunteers.

The study included 30 volunteers, who were equally and randomly distributed into three groups: Group I (control group), Group II (the group that used the conventional vaginal cone), and Group III (which used the anatomical intravaginal device developed specifically for this study).

For the AFA, considered a selection criterion, the volunteers were oriented as to the correct performance of the contraction with the maximum inhibition of synergistic muscles. After this initial examination, Groups II and III were submitted to a physical therapy intervention with the cones and, subsequently, evaluated using biofeedback and bargraph, respectively

Intravaginal device and conventional vaginal cone

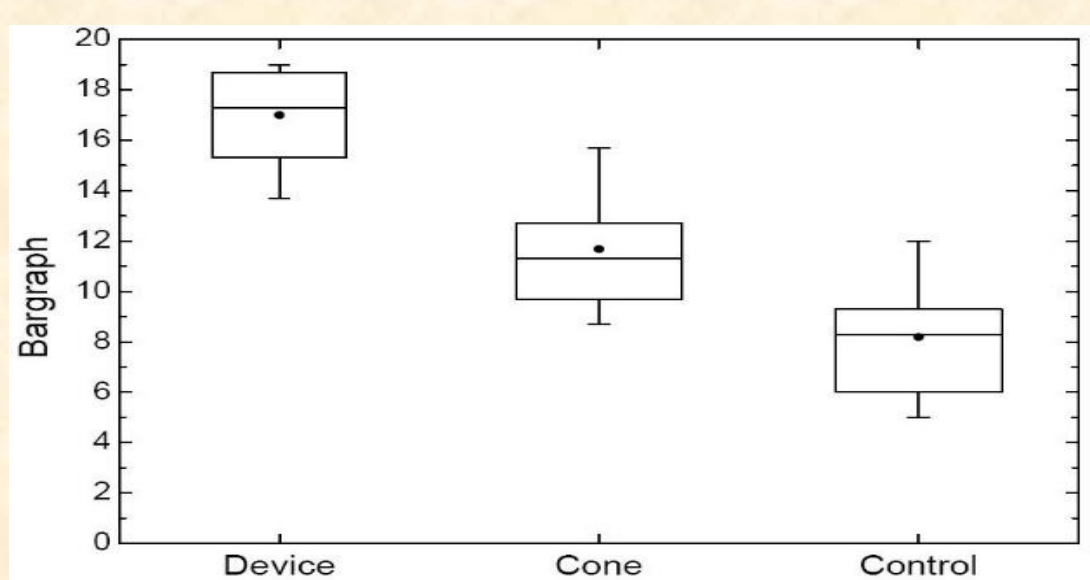


Figure A: intravaginal device developed for the research (Source: author) and Figure B: conventional vaginal cone (Source: Carci)

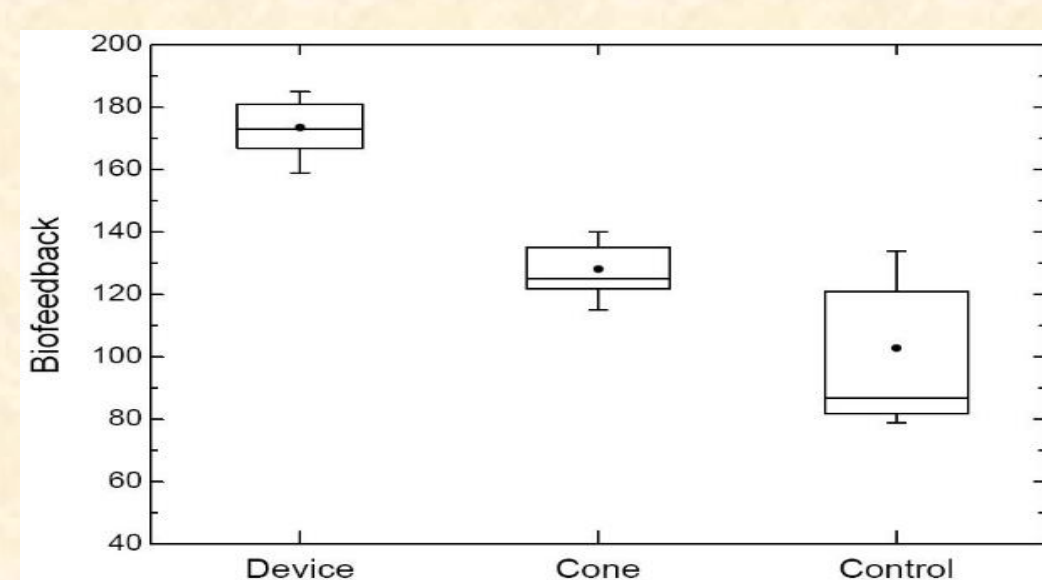
RESULTS

After the data analysis, it was verified that the mean obtained by the three contractions performed with a 3-sec rest between them, captured by the bargraph (Graph 1) and biofeedback (Graph 2), followed by the use of the anatomical intravaginal device that was significantly greater when compared with the conventional vaginal cone and the control group.

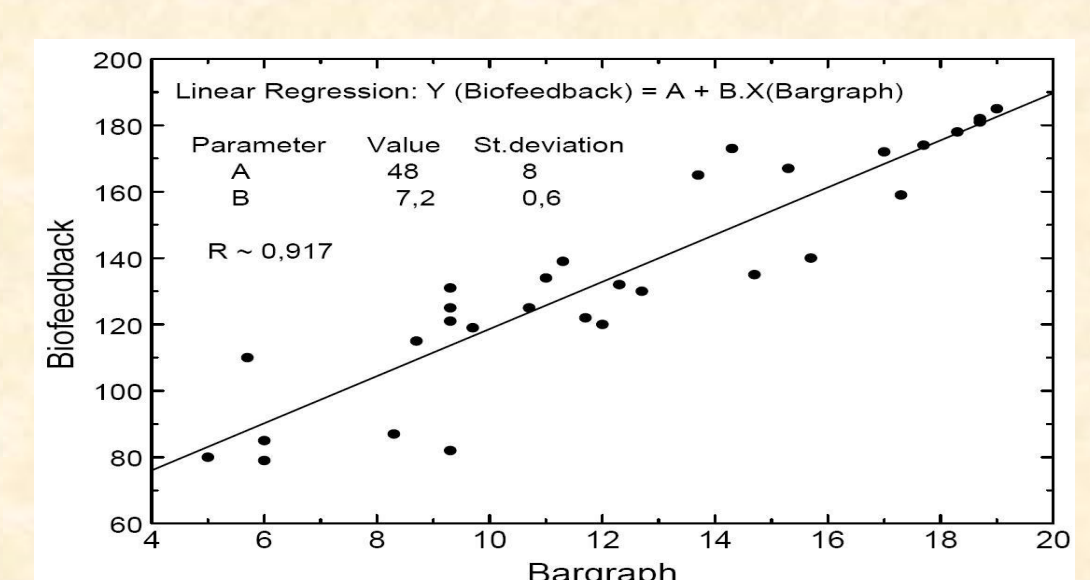
The analysis of the data showed a statistically significant difference, concerning the evaluated parameters, in the group that used the anatomically shaped intravaginal device.



Graph 1. Bargraph BoxPlot



Graph 2. Biofeedback BoxPlot



Graph 3. Scatter diagram

CONCLUSIONS

The intravaginal device developed in this study was more effective in improving the perception and the consequent perineal muscle contraction capacity, in comparison with the conventional cone, which can be assigned to its innovative configuration and design concerning the anatomical shape and increased diameter and length.

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