

ABDOMINOPELVIC KINESIOTHERAPY FOR PELVIC FLOOR MUSCLE TRAINING: A TESTED PROPOSAL IN DIFFERENT GROUPS

Introduction

The abdominopelvic enclosure seems like a house, where the walls are presented by the abdominal and lumbar muscles, the ceiling by the diaphragm muscle, while the floor, as perceived by its own name, by the pelvic floor muscles. Recent studies^{1,2} have shown that exercise, centered on the abdominopelvic enclosure, could favor the pelvic floor muscle function. Thus, our proposal was to study the effects of abdominopelvic kinesiotherapy on female pelvic floor muscle function.

Design

Eighty two women participated in this study, being 11 nulliparous, 13 primiparous pregnant, 20 primiparous postpartum and 38 postmenopausal women; who were evaluated by digital palpation, surface electromyography³ and vaginal dynamometry in order to investigate their pelvic floor muscle strength. Two questionnaires from the *International Consultation on Incontinence Questionnaires* were used in order to assess urinary symptoms: *International Consultation on Incontinence Questionnaire Urinary Incontinence short Form (ICIQ UI-SF)* and *International Consultation on Incontinence Questionnaire Overactive Bladder (ICIQ-OAB)*.

This intervention protocol lasted for 60 minutes, three times a week, totalizing 10 sessions and was supervised by a physiotherapist, using a Gym Ball. In this video, the protocol which is going to be presented in one continuous series, actually was performed with five repetitions per series in each position accompanied by both, fast and sustained contractions of the pelvic floor muscles, according to Marques and collaborators.³

The protocol is performed in five different positions: supine, sitting on the floor, squat, sitting on the gym ball and finally standing position. It begins with a respiratory exercise. In the supine position, there are five exercises; the participant performs hip flexion while alternately extending the knees upward followed by a series of lumbar column rotation together with abdominal muscle contractions and the bridge exercise, lifting the hips up to form a bridge, always accompanying the respiratory movements. The next exercise performs pelvic dissociation movements followed by hip and leg flexion as well as extension, by moving the ball, always holding the contraction of the abdomen.

Trunk and arm movements are performed in the sitting on the floor position with the legs abducted. In the squat position, sustained pelvic floor contractions are performed. In the sitting on the gym ball position, antiversion, retroversion, circumduction and lateral tilting movements are carried out. In the standing position, while the lumbar column holding the ball towards the wall and recruiting the pelvic floor muscles, first, squatting then pelvic mobility are performed, followed by pushing the ball towards the wall using both hands while contracting the abdomen. Stretching exercises are performed to conclude the protocol.

Analysis of Variance (ANOVA) and, when necessary, Wilcoxon test was used. The significance level for statistical tests was 5%.

Results

A significant increase in pelvic floor muscle strength was observed by digital palpation in all groups. This finding was confirmed by electromyography and vaginal dynamometry in the pregnant ($p=0.0001$), postpartum ($p=0.0001$) and postmenopausal women (sEMG $p=0.003$; dynamometry $p=0.02$) groups, with a concomitant decrease in urinary symptoms observed by the validated questionnaires ($p<0.05$).

Conclusion

The abdominopelvic kinesiotherapy program promotes an increase in pelvic floor muscle strength and a decrease in urinary symptoms. Therefore it can be used in clinical practice.

References

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Disclosures

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