Clinical evaluation of pelvic floor muscle function in continent and incontinent women.


Source

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Abstract

AIMS:

The aim of the study was to investigate the reliability of a scoring system for the investigation of voluntary and reflex co-contractions of abdominal and pelvic floor muscles in lying, sitting, and standing positions in continent and incontinent women.

METHODS:

A visual inspection and digital (strength, tone, speed, and endurance) palpation scale was developed to measure the coordination of the lower abdominal and pelvic floor muscles. Inter-observer reliability of the scales was investigated in 40 continent and 40 incontinent women. Differences between the continent and incontinent group were analysed.

RESULTS:

Inter-observer reliability for the visual inspection scale showed kappa values between 0.91 and 1.00, for tone percentage of agreement ranged from 95 to 100% (superficial) and 95 to 98% (deep muscle). Weighted Kappa (K(w)) varied from 0.77 to 0.95 for strength and 0.75 to 0.98 for the inward movement of superficial and deep pelvic floor muscles. K(w) for coordination between the superficial and deep part of the pelvic floor muscles groups was from 0.87 to 0.88 and 0.97 to 1.00 for endurance and global speed of the pelvic floor contraction. The continent women exhibited significantly better coordination between the pelvic floor and lower abdominal muscles during coughing in all three positions. Also the superficial part of the inward movement, the feeling and the coordination of the pelvic floor muscles were significantly better in the continent group.

CONCLUSIONS:

Visual inspection and digital tests are easy and reliable methods by which insight can be gained into the multi-muscular activity and coordination of the pelvic floor and lower abdominal muscles in continent and incontinent women.

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