

A quantitative approach to measure women's sexual function using electromyography: preliminary study on Kegel exercise

ABSTRACT

Background: Currently, the reference standard used to clinically assess sexual function among women is a qualitative questionnaire. Hence, a generalised and quantitative measurement tool needs to be available as an alternative. This study investigated whether an electromyography (EMG) measurement technique could be used to help quantify women's sexual function. Material/Methods: A preliminary intervention study was conducted on 12 female subjects, who were randomised into a control (n=6) and an intervention (n=6) group. Intervention involved a set regimen of pelvic floor muscle exercises (Kegel) and the control group did not have any treatment. All subjects were asked to answer a validated, self-rated Pelvic Organ Prolapse/Urinary Incontinence Sexual Function Questionnaire (PISQ). EMG measurements of the pelvic floor muscles (PFM) and the abdominal muscles were taken from all women at recruitment and 8 weeks after study commencement. Results: After 8 weeks, most of the subjects in the control group did not display any noted positive difference in either PISQ score (4/6) or in their muscle strength (4/6). However, a noted progressive difference were observed in subjects who were placed in the Kegel group; PISQ score (5/6) and muscles strength (4/6). Conclusions: The noted difference in the Kegel group subjects was that if progress is observed in the sexual function, improvement is also observed in the strength of at least 2 types of muscles (either abdominal or PFM muscles). Thus, EMG measurement is a potential technique to quantify the changes in female sexual function. Further work will be conducted to validate this assumption.

Keyword: Women's sexual function; Electromyography (EMG) measurement; Pelvic Organ Prolapse/Urinary Incontinence Sexual Function Questionnaire (PISQ) questionnaires; Kegel exercise