

IS SEXUAL FUNCTION RELATED TO PELVIC FLOOR MUSCLE FUNCTION IN WOMEN WITH MULTIPLE SCLEROSIS?

Hypothesis / aims of study

The prevalence of sexual dysfunction in women with Multiple Sclerosis (MS) ranges between 40% and 80%, it is assumed that it is caused by several factors as altered genital sensation, decreased libido, decreased or absent arousal and orgasm symptoms frequently caused by the disease itself, the spinal cord lesions or psychological factors. As pelvic floor muscles (PFM) are responsible for involuntary rhythmic contractions during orgasm, some studies suggest that a better sexual life is related to a better PFM function in women without neurological problems. The aim of the present study was to evaluate the association between PFM strength and resistance of women with MS with different domains of sexual function.

Study design, materials and methods

Twenty women of 18 years of age or older with a definitive diagnosis of MS, who had the relapsing-remitting form of MS but who have been stable over the previous 4 months, EDSS score less than 6,5, adequate cognitive capacity to complete the assessment, able to contract their PFM (grade 1 or more in Oxford scale) and with active sexual life were invited to participate of this study. Potential participants were excluded if they were pregnant, had previous gynaecologic surgery, had a caesarean section or vaginal delivery within previous 6 months, pelvic organ prolapse (POP) greater than stage I on POP-Q examination. Patients were invited to answer the Female Sexual Function Index (FSFI) a 19-item

self-reported measurement of female sexual function divided in six domains: desire, arousal, lubrication, orgasm, satisfaction, and pain. Each domain is scored on a scale of 0–6, with higher scores indicating better function. The total score range is 2–36.

Vaginal evaluation was performed according the PERFECT scheme with patients in a supine position with bent knees and legs abducted. The PERFECT scheme includes assessment of the Power (P) scored from 0 (no contraction) to 5 (contraction against strong resistance) according to modified Oxford grading system; Endurance (E) noted in seconds and refereed to the time that a maximal contraction could be repeated; Repetitions (R) recorded the exhaustibility and described as the number of times that contraction could be repeated and number of Fast contractions with Every Contraction Timed (ECT) completing the acronym. In this study only the P and E domains were used and correlated with all domains of FSFI questionnaire.

Results

The main score of each domain of FSFI questionnaire is showed in fig. 1. In the P domain the grater score found was 3. Three women showed a P of 1, ten P of 2, and seven a P of 3, for this reason patients were divided in two groups: Group P1,2 (P 1,2) and Group P3 (P3). In the E domain the grater score was 5 seconds. Three women presented a E of 1, ten a E of 2, four a E of 3, two a E of 4 and one a E of 5. In the same way, patients were divided in two groups: Group E 1,2 (E1,2) and Group E 3,4,5 (E 3,4,5).

In the statistical analysis the test of Mann Whitney was used to evaluate the correlation between the P and E domains of PERFECT scheme with the six domains of FSFI questionnaires. Desire ($p = 0,01$), Arousal ($p = 0,04$) and Orgasm ($p = 0,02$) showed statistic correlation with the P of PERFECT scheme. No domain of FSFI was significantly correlated with the E domain of PERFECT scheme.

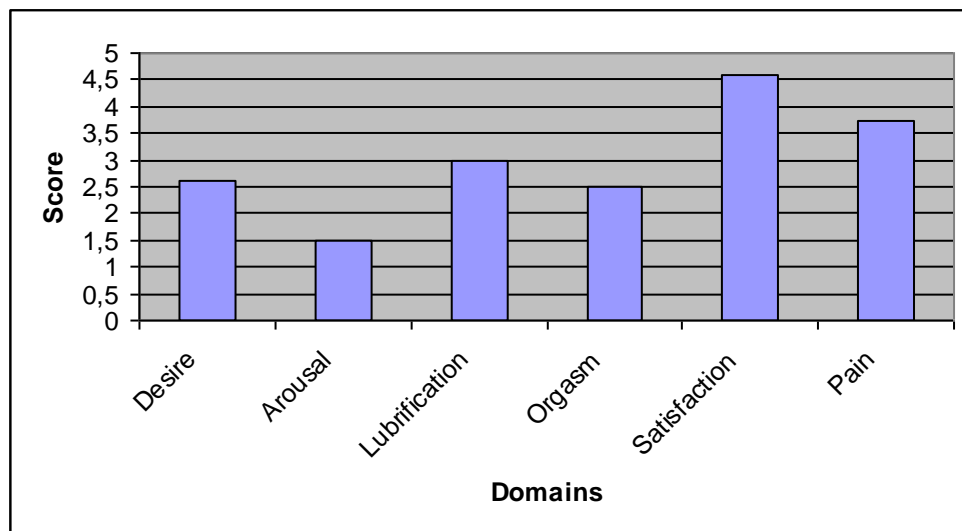


Fig 1. Mean scores of FSFI domains in Multiple Sclerosis patients.

Interpretation of results

At the time of sexual stimulation, sensory impulses travel to the sacral cord through the pudendal nerve and in response, blood is directed to the genital organs, through the control of efferent fibers which innervates the vagina, uterus, and PFM. This continued stimulation may progress to a peak sensation of intense pleasure accompanied by involuntary rhythmic contractions of the pelvic striated circumvaginal musculature, often with concomitant uterine and anal contractions and myotonia.

In this study we found a correlation of desire, arousal and orgasm with the power of PFM in concordance with previous studies in women without neurological impairments. Since the orgasm phase involves PFM contraction, the correlation between the strength of PFM and orgasm is understandable.

MS patients have an abnormal central motor conduction in consequence of demyelination of lower motor neurons of the anterior horn in the spinal cord as a result the function of the PFM is impaired in these patients, this impairment can explain the low scores in FSFI questionnaire.

Concluding message

This study supports that PFM strength is correlated with desire, arousal and orgasm of women with Multiple Sclerosis.

References

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Disclosures

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Subjects: HUMAN **Ethics Committee:** Comite de ética da Faculdade de Ciências Médicas - UNICAMP **Helsinki:** Yes
Informed Consent: Yes