Abstract

Objectives: Deep infiltrating endometriosis is associated with chronic pelvic pain, dyspareunia, and pelvic floor muscle hypertone. The primary aim of the study was to evaluate the effects of pelvic floor physiotherapy on changes in the area of levator ani muscle hiatus under Valsalva maneuver assessed with transperineal ultrasound in women with deep infiltrating endometriosis suffering from superficial dyspareunia.

Methods: In this randomized controlled trial, 34 nulliparous women diagnosed with deep infiltrating endometriosis and associated superficial dyspareunia were enrolled. After an initial clinical examination, evaluation of pain symptoms using Numerical Rating Scale and 3D/4D transperineal ultrasound, eligible women were randomly assigned (1:1) to no intervention (control group, 17 women) or treatment with five individual sessions of pelvic floor physiotherapy (study group, 17 women). Four months after the first examination, all women underwent a second evaluation of pain symptoms and transperineal ultrasound. During both ultrasound examinations, the levator hiatal area was measured at rest, upon maximum pelvic floor muscle contraction and maximum Valsalva maneuver. The primary outcome measure was the change in the levator hiatal area at maximum Valsalva maneuver between the two examinations in the two groups.

Results: Thirty women completed the study and were included in the analysis: 17 in the study group and 13 in the control group. The percentage change in levator hiatal area at maximum Valsalva maneuver between the two examinations was higher in the study group than in the control group (20.0±24.8% vs. -0.5±3.3%, P=0.02). After treatment, the change in the Numerical Rating Scale score of superficial dyspareunia was higher in the study group than in the control group (median [interquartile range] -3 [-4,-2] vs. 0 [0,0], P <0.01). Moreover, at second examination significant differences between the two groups were found regarding chronic pelvic pain (0 [-2,0] vs. 0 [0,1], P =0.01).

Conclusions: In women with deep infiltrating endometriosis, pelvic floor physiotherapy seems to be effective in the improvement of superficial dyspareunia, chronic pelvic pain, and pelvic floor muscle relaxation, leading to an increase in levator hiatal area under Valsalva maneuver observed by 3D/4D transperineal ultrasound.