

INTRODUCTION AND AIM

For many years, the pelvic floor muscles training (PFMT) was used almost exclusively for the treatment of stress urinary incontinence (SUI). In the 1980s, it has been verified that the voluntary contraction of the pelvic floor muscles (PFM) could also be used as a treatment option to control the symptoms of the overactive bladder syndrome (OAB) and in the urge urinary incontinence (UUI); controlling the urgency and preventing the loss of urine during the detrusor muscle contraction⁽¹⁾. The behavioral therapies (such as: bladder training, bladder control strategies, PFMT and fluid management) should be offered as first-line therapy for all the patients with OAB⁽²⁾. The aim of this study was to evaluate the efficacy of PFMT in reducing the symptoms of OAB non-neurogenic in women, through an integrative review.

STUDY DESIGN, MATERIALS AND METHODS

An integrative review about PFMT was conducted in MEDLINE, PubMed, PEDro, Scielo, Bireme and Central (Cochrane Library) databases; in what randomized, non-randomized, controlled, uncontrolled and parallel clinical trials from 2002 to 2016 were chosen.

RESULTS AND DISCUSSION

Table 1 - Characteristics and results of the study:

Authors/ Year	Sample Characteristics	Treatment Groups	Protocol Description	Results
Burgio et al., 2002	222 women with UUI and MUI (prevalent urgency)	Group BT + PFMT with BFB; Group BT without BFB; Group instructions book.	Sustained contraction (10 sec), 3x a day	Incontinence episodes: (p=0,23); Quality of life: (p<0,05)
Wang et al., 2003	103 women with overactive bladder symptoms	Group PFMT; Group PFMT with BFB; Group FES.	5 sustained contractions (6 sec) and 10 fast contractions	Frequency: (p=0,214); Nocturia: (p=0,056); Urgency: (p=0,172); Quality of life: (p=0,003)
Millard, 2004	475 women with frequency, urgency and UUI	Group DT; Group DT + PFMT.	Sustained contractions (10 sec): 15 in the morning and 20 at night	Frequency: (p=0,3549); Incontinence episodes: (p=0,0001) Urgency: (p=0,3029)
Kafri et al., 2007	164 women with overactive bladder symptoms and UUI	Group PFMT + transverse abdominal muscle; Group DT.	Sustained contractions (6 a 10 sec), 8-12 replicates	Frequency: (p=0,13); Nocturia: (p=0,52); Quality of life: (p=0,01)
Arruda et al., 2008	64 women with overactive bladder symptoms, detrusor overactive and MUI	Group DT; Group FES; Group PFMT.	20 sustained contractions (10 sec) and 40 fast contractions	Frequency: (p=0,667); Incontinence episodes: (p=0,972)
Kafri et al., 2013	164 women with overactive bladder symptoms and IUU	Group DT; Group BT; Group PFMT; Group CPFR = PFMT + BT.	Sustained contractions (6-8 sec), 3 sets of 8-12 replicates	Incontinence episodes: (p=0,131); Urgency: (p=0,503); Quality of life: (p=0,438)
Kaya et al., 2015	71 women with UUI and Mixed Urinary Incontinence	Group BT + PFMT; Group BT.	10 sustained contractions (15 sec) and 5-30 fast contractions (2 sec)	Frequency: (p= 0,226) Inc. episodes: (p=0,546); PFM force: (p=0,916); Quality of life: (p=0,045)
Yüce et al., 2016	35 women with overactive bladder	Group PFMT with vaginal cone; Group DT.	Sustained contraction (10 min)	PFM force: (p=0,780)
Voorham et al., 2016	54 women with overactive bladder	Group PFMT with BFB + BT; Group BT.	Lying, sitting and standing exercises, during daily activities, for 9 weeks	Urgency: (p=0,008)

PFMT: training of pelvic floor muscles; BT: bladder training; DT: drug treatment; BFB: biofeedback; FES: functional electrical stimulation; PFM: pelvic floor muscles; CPFR: combined pelvic floor rehabilitation. **Source: Created by the authors (2017).**

The exercise protocols used in the analyzed studies were not clearly described, making it difficult to compare them. There was no consistent measurement of PFM function and most PFMT protocols were applied without considering the deficiencies of muscle group, which were found in the initial evaluations. The principles of measuring exercises have not been described in most of the protocols, considering the individual capacities. According to the American College of Sports Medicine, this is a very important condition for the training of skeletal muscles⁽³⁾. The primary and secondary outcomes were varied, which has made it difficult to compare the results between the clinical trials. The methodological mistakes observed in the studies, associated with the diversity of the protocols and outcomes, do not allow conclusions to be drawn about PFMT efficacy or not in the control of the OBS symptoms.

CONCLUSION

The results of this integrative review suggest that the evidences in the current literature are not enough to affirm if PFMT is effective or not in the treatment of the symptoms of OAB non-neurogenic.

References:

- BURGIO KL, WHITEHEAD WE, ENGEL BT. Urinary incontinence in the elderly: bladder-sphincter biofeedback and toileting skills training. *Ann Intern Med.* 104:507-15, 1985
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