

Pelvic Physical Therapy Distance Journal Club

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Can maximal voluntary pelvic floor muscle contraction reduce vaginal resting pressure and resting EMG activity? Naess I, Bo K. *Internat Urogynecol* 2018;29:1623-1627.

Doi: 10.1007/200192-018-3599-1.

Aim: To assess the effect of PFM contract – relax on PFM tone using manometry and sEMG in women with and without Provoked vestibulodynia (PVD)

Study Design: Assessor blinded comparison study of 35 women with PVD and 35 controls, nulliparous

Methods:

- Participants asked to perform
 - Two MVC 8 seconds hold and 10 second rest
 - One MVC 10 to 12 seconds hold with 10 second rest
- Resting value was taken 5 to 6 seconds after contraction
- Vaginal pressure manometry first, vaginal sEMG measurement second using rectal EMG sensor

Results: Table 1 on page 1625.

- Vaginal resting pressure (manometry) was sig less after 3 MVC (patients 0.001, controls 0.027).
- Vaginal resting activity (EMG) was significantly less after 3 MVC in patients 0.001 only.

Strengths – homogeneous participants, blinded assessors, precision manometry

Weaknesses – only females ages 18-38, no data on pain, EMG data not normalized, use of the rectal sensor inside the vagina, non randomized order of testing

Conclusion: Women with PVD had sig lower vaginal resting pressure (manometry) and lower PFM activity (EMG) after 3 MVC. MVC may be considered in efforts to reduce PFM tone.

Discussion:

- Studies have shown contract – relax has been effective in increasing ROM in skeletal muscles.
- Autogenic inhibition has been the explanation for relaxation (although it is currently under debate).
- Chmielewska (ref 26) - young continent women - 6 wks PFMT, sig decrease resting activity (EMG).
- Glazer (1995) – vestibulodynia – 16 weeks aggressive PFMT, 68% decrease resting activity (EMG).
- Cornel – CPP- Biofeedback training, hold / relax, bladder training, significant decrease resting sEMG
- Gentilcore-Saulnier – PVD - Biofeedback training, dilators, ES, palpation: decreased tone, increased flexibility, increased ability to relax

List discussion questions

- Would you consider contract relax as a treatment for patients with increased PFM tone?
- If so, how would you choose those patients?

Additional reference:

Glazer H, et al. Treatment of vulvar vestibulitis syndrome with electromyography biofeedback of pelvic floor musculature. *J of Reprod Med* (1995) 40:283-290.