

ASSESSMENT OF PELVIC FLOOR MUSCLE FUNCTION IN FEMALES WITH AND WITHOUT FUNCTIONAL CONSTIPATION USING TRANSABDOMINAL ULTRASOUND

Hypothesis / aims of study

Pelvic floor dysfunction is a common cause of functional constipation; its diagnosis requires anorectal physiological tests that are not widely available. Transabdominal ultrasound imaging has been established as an appropriate method for visualizing and measuring pelvic floor muscle (PFM) function. No study has directly evaluated PFM function in individuals with and without functional constipation. The purpose of this study was to investigate the PFM function in women with and without functional constipation using transabdominal ultrasound.

Study design, materials and methods

A total of 40 non-pregnant female (20 with functional constipation, 20 without constipation) participated in this study. The subjects were asked to perform two tasks: (1) a PFM contraction and (2) a maximal straining Valsalva maneuver. The amount of bladder base movement on ultrasound was measured in all subjects and considered as an indicator of PFM function.

Results

Statistical analysis (Independent t-test) revealed no significant difference in transabdominal ultrasound measurements for PFM function between the two groups during PFM contraction and Valsalva maneuver.

Interpretation of results

Real-time ultrasound imaging has been recently established as a method to assess muscle structure, mobility, and activation patterns. Ultrasound is frequently used to evaluate the voluntary muscle contraction or automatic muscle function at the unconscious level. However, what we measured in this study was a voluntary contraction and not the automatic recruitment during functional tasks.

Concluding message

It seems that women with functional constipation have no significantly pelvic floor mobility compared with those with functional constipation.

References

1. Whittaker, JL., Thompson, JA., Teyhen, DS., Hodges, P. (2007), Rehabilitative ultrasound imaging of pelvic floor muscle function. *J Orthop Sports Phys Ther*, 37:487-498.
2. Wofford, SA., Verne, GN. (2000), Approach to patients with refractory constipation. *Curr gastroenterol rep*, 2(5):389-94.

Disclosures

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