

APPROCHE POSTURO-RESPIRATOIRE (A.P.O.R. ®) METHOD IN THE MANAGEMENT OF DIASTASIS OF RECTUS ABDOMINIS MUSCLE AND PELVIC ORGAN PROLAPSE AFTER DELIVERY.

Hypothesis / aims of study

Diastasis of the rectus abdominis muscle (DRAM), defined as an impairment characterized by a midline separation of the rectus abdominis muscle along the linea alba frequently occurs during and after pregnancy; DRAM can weaken abdominal and pelvic floor muscles, reported to function synergistically, such that each muscle group enhances the effectiveness of the other during contraction (1). Thus, DRAM may play an important role in the development of altered trunk mechanics and impairments affecting the support-related function of the pelvic floor muscles: it was found to be associated to pelvic organ prolapse (POP), the descent of one or more of the anterior vaginal wall, posterior vaginal wall, the uterus (cervix), or the apex of the vagina and has been related to impaired pelvic stability and changed posture, with pelvic floor weakness (2).

To date there is insufficient evidence to recommend that exercise may help to prevent or reduce DRAM and there is now evidence available indicating some benefit from conservative treatment of prolapse symptoms and severity, specifically for PFMT as compared to no intervention.

The purpose of the present study was to assess the effectiveness of an exercise proposed for DRAM as an exercise for “in-ward” of the pelvic muscles with the likelihood of being used in prevention and treatment of POP.

Study design, materials and methods

Twenty volunteers postnatal women (both primiparous - n.12 – and multiparous – n.8) participated in this study. Before starting the procedure, the subjects were verbally instructed in the correct performance of the “drawing-in” maneuver, activation of the lower fibers of transversus abdominis muscle with subjects instructed, while exhaling from pelvic cavity to abdominal cavity, to draw in the abdominal musculature toward the spine in the supine resting position with sacrum rotated backwards relative to the iliac bones (counternutation), arms alongside the body – according to the Approche Posturo-Respiratoire® method (3).

An ultrasound scanner with a 7.5-MHz, 39-mm linear transducer was used to collect images in brightness mode (B-mode) by the same examiner, by placing the transducer in a transverse orientation centrally on the skin 4 cm. above the umbilicus for the DRAM and in a transverse orientation, across the midline of the abdomen, immediately superior to the pubic symphysis, for the bladder base to assess any contraction of the pelvic floor muscles during the “drawing-in” manoeuvre.

Results

Values of inter-recti distance (IRD) measured ranged from 2.7 to 3.8 cm. at 2.5 cm above the upper margin of the umbilical ring. The inter-rectus distance was significantly lower during isometric contraction compared with rest - 2.5 (SD 0.71) cm. vs 3.12 (SD 0.86) cm.; mean difference 0.7 cm; 95% CI 1.96. The same exercise, in all women, caused the elevation of pelvic floor muscles, confirmed by observation of lifting movement of the bladder base.

Interpretation of results

Soon after delivery DRAM and pelvic floor muscles weakness frequently coexist. It's important to avoid exercises that increase intra-abdominal pressure and can worsen the pelvic floor muscles weakness with an increased risk of urinary tract dysfunctions and pelvic organ prolapse: increased intra-abdominal pressure due to contraction of the diaphragm and abdominal muscles directly opposes the correct “in-ward” movement during pelvic floor muscles contraction.

Concluding message

Voluntary contraction of the pelvic floor and associated contraction of the transversus abdominis muscle during the exhalation according to the Approche Posturo-Respiratoire® method have been proven effective under ultrasound control to achieve both goals: improvement of DRAM and “in-ward” of pelvis floor muscles.

Ultrasound imaging can provide the advantage of provision of real-time information, thereby providing instantaneous visual feedback about the correct exercise for improving diastasis and the direction of pelvic floor movement during a pelvic floor muscle contraction.

References

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Disclosures

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