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Title (type in CAPITAL LETTERS, leave one blank line before the text) OBSERVATIONS ON MRI OF NORMAL LEVATOR ANI: A PRELIMINARY COMMUNICATION.
<p>Introduction: The levator ani muscles play an important role in support of the pelvic floor. In order to study the changes these muscles undergo in pelvic floor prolapse it is essential to study the anatomy of the levator ani in normal women. Multiplanar imaging with MRI allows a detailed study of the undisturbed anatomy of the levator ani.</p>
<p>Aim: To study the morphology and function of the levator ani in normal women.</p>
<p>Material and Methods: Ten nulliparous, premenopausal women with no previous pelvic surgery underwent a dynamic MRI using a 1.5 Tesla scanner. Coronal, axial and sagittal images both at rest and on straining were analyzed on a computerised console. The origin, the orientation, the thickness and the changes in levator ani on valsalva manouvre were studied. The angle between the ileococcygeus and the obturator muscle (ileo-obturator angle) was measured on coronal sections at the level of the ischial spines at rest and on straining.</p>
<p>Results: The levator ani consists of two parts: 1) the puborectalis or pubovisceralis, 2) the ileococcygeus or diaphragmatic part which were individually studied. Fenestrations were noted at the origin of the ileococcygeus from the fascia covering the obturator internus. Fenestrations or gaps were also noted in the diaphragmatic portion of ileococcygeus in all women. These findings were confirmed on the corresponding sagittal and coronal MRI sections. The mean thickness of this muscle was 3.4mm. The fibres of the ileococcygeus unite at the anococcygeal raphae and have an upward convexity at rest. On straining the muscle thickness increased by 20% and the convex shape flattened out but did not become concave. The ileo-obturator angle increased in 70% (7/10) women on straining, which may be a predictor of normal functioning of this muscle. Puborectalis was a thicker muscle than ileococcygeus and formed a band around the urethra, vagina and rectum. The puborectalis band was shorter anteriorly but increased in height dorsally. The hiatus of the puborectalis was noted to narrow on straining in 50%(5/10) of women, probably as a result of reflex contraction of this muscle.</p>
<p>Conclusion: Ileococcygeus is a thin muscle with fenestrations and supports the pelvic floor. The puborectalis is a bulkier muscle: its main function is to act as a sphincter of the pelvic floor.</p>