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Bezerra M R[1], Soares A F[2], D'ippolito G[2], Carneiro C F[2], Nesrallah A [2], Nesrallah L J[2], Freitas D G[2], Bruschini H[2], Szejnfeld J[2], Srougi M[2]
1. Federal University of São Paulo - UNIFESP-EPM, 2. UNIFESP-EPM

MUSCULAR ATROPHY OF THE PELVIC FLOOR IN MRI STUDIES. IS THERE ANY CORRELATION WITH FEMALE URINARY INCONTINENCE?

Aims of Study
To demonstrate the value of magnetic resonance imaging in the pelvic floor and its correlation with female incontinence. An evaluation of the muscular atrophy and ligaments structures was performed in women with and without urinary stress incontinence.

Methods
This is a prospective, double blind study. Forty-seven female patients, 22 assymptomatic female normal volunteers and 25 women with stress urinary incontinence, aged between 20 to 80 (mean 50) years old, were examined. The Philips Gyroscan ACS 1.5T was used with turbo spin-echo sequences, T1 and T2 weighted, on axial, coronal and sagittal were analyzed by two different radiologists, without previous knowledge of the diagnoses. Aiming to identify the pubococcygeal, iliococcygeal, puborectal, coccygeal, obturatorius internus, and urethral sphincter muscles and pubouretral ligament; as well as evaluating the thickness and integrity of these muscular groups. Atrophy was characterized comparing the results to the average and standard deviation of the normal measures [1]. Qualitative assessment was also performed in parallel. Statistic analysis included Qui-squared test (χ^2),inter-observer agreement proportion index (considering: < 40% bad, 40-75% good and > 75% very good) and the confidence interval- 95%. The software was the Stata inc.

Results
There was no significant difference (p>0,05) in the identification of muscular atrophy and ligaments structures between incontinent and asymptomatic women. The inter-observer agreement was: pubococcygeal(96%), iliococcygeal(94%), puborectal(87%), coccygeal(87%), obturatorius internus(96%), urethral sphincter(72%) and the pubouretral ligament(55%).

Conclusions
The MRI shows effective identification of the muscular and ligaments structures with good reproductive inter-observer agreement. However, there was no statistical difference in the thickness of the muscles or ligaments structures between the incontinent and asymptomatic women.

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