RESULTS

Our younger premenopausal patient group included 12 nulliparous women with a mean age of 28.2 years (95% CI: 24.8-31.5); our older post-menopausal group included 10 nulliparous women with a mean age of 61.8 years (95% CI: 55.6-67.8).

There was a significant differences between BMI, race, and history of medical illness between the two groups using chi-squared or sample t-test analyses.

The study objective was to determine whether age is associated with the levator ani hiatus compared to a more oval form in older women and this change in shape is possibly associated with worse pelvic floor symptoms.

*Fig 2: A 3-D EVUS sagittal sections of two women: a young female (left) with Antero-posterior (AP) 3.4mm diameter and oval shape (LR) of the old female (right) with LR 3.1 vs 3.4 (p=.017).

**CONCLUSIONS**

Woman’s increasing age was found to be significantly associated with a more oval pelvic floor shape, affecting pelvic floor urinary and prolapse function.

**REFERENCES**


8. Jonia Alshiek, MD, MSc, Mehrsa Jalalizadeh, MD, Qi Wei, PhD, Parag Chitnis, PhD, S. Abbas Shobeiri, MD, MBA. Levator Ani Hiatus Elongation in Old Post-Menopausal Women. Inova Health System Five-in-Five emails.

9. This was a pilot cross-sectional study that was approved by the Institutional Review Board of Inova Health System in Falls Church, Virginia.

10. Two groups of young (18-40y/o) and old (52-85y/o) nulliparous women were recruited for the study via Inova Net webpage and Inova Health System Five-in-Five emails.

11. In this study we found that older women have more oval pelvic floor musculature (95% CI: 27.3-21.5) vs. 22.2 (95% CI: 12.7-31.5) (p=031). Table 1. Minimal levator hiatus (MLH) as was not significantly different in the two groups (p=0372) (Table 2). AP diameter was higher in the older group: 43.1mm vs. 45.7mm (p=.006). LR diameter was lower in the older group but not statistically significant: 33.5 vs. 32.3 (p=.06). The AP/LR ratio was significantly higher in the older group (1.2 vs 1.4, p=.017).

12. The two groups were merged for regression analysis. PFDI, POPDI, and PFIQ scores were found to be positively correlated with AP/LR ratio (Table 3). POPDI and PFIQ score was also positively correlated with AP/LR ratio (p=.0028).

13. Logistic regression analysis showed significant negative correlation between age and sexual activity (OR=.921, p=013).

**METHODS**

**Sonographic measurements included:**

- AP diameter
- LR diameter
- MLH

To measure the MLH, we used a mid-sagittal view indicating the shortest distance between the pelvic symphysis and the levator plate, which formed the AP diameter of the MLH (Fig1).

**RESULTS**

- To determine whether age is associated with change in pelvic floor 3-pelvic organs. Poor function of these muscles is shown to cause urinary incontinence and pelvic floor dysfunction.

- To measure the MLH, we used a mid-sagittal view indicating the shortest distance between the pelvic symphysis and the levator plate, which formed the AP diameter of the MLH (Fig1).

- This was a pilot cross-sectional study that was approved by the Institutional Review Board of Inova Health System in Falls Church, Virginia.

- Two groups of young (18-40y/o) and old (52-85y/o) nulliparous women were recruited for the study via Inova Net webpage and Inova Health System Five-in-Five emails.

- Recruitment took place between March 2017 and December 2017.

- Exclusion criteria:
  - A history of prior incontinence or prolapse surgery, a diagnosis of reproductive anomalies, prior pelvic radiation, inability to complete written questionnaires.
  - The following obtained variables: Age, Height, Weight, Body Mass Index, Race, Ethnicity.
  - Subjects who had completed PFDI-20. Pelvic floor dysfunction questionnaire [PFDI-20], Female Sexual Function Inventory (FSFI-19), and the Minimal Levator Hiatus (MLH) as was not significantly different in the two groups (p=0372). AP diameter was higher in the older group: 43.1mm vs. 45.7mm (p=.006). LR diameter was lower in the older group but not statistically significant: 33.5 vs. 32.3 (p=.06). The AP/LR ratio was significantly higher in the older group (1.2 vs 1.4, p=.017).

- The two groups were merged for regression analysis. PFDI, POPDI, and PFIQ scores were found to be positively correlated with AP/LR ratio (Table 3). POPDI and PFIQ score was also positively correlated with AP/LR ratio (p=.028).

- Logistic regression analysis showed significant negative correlation between age and sexual activity (OR=.921, p=013).

**REFERENCES**

- Jonia Alshiek, MD, MSc, Mehrsa Jalalizadeh, MD, Qi Wei, PhD, Parag Chitnis, PhD, S. Abbas Shobeiri, MD, MBA. Levator Ani Muscle Hiatus Comparison Between Age and Sexual Activity (OR=.921, p=013).

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- Logistic regression analysis showed significant negative correlation between age and sexual activity (OR=.921, p=013).