

## COMPARISON OF BASAL TONUS AND MAXIMUM CONTRACTION OF LEVATOR ANI BETWEEN WOMEN WITH STRESS URINARY INCONTINENCE AND WOMEN WITHOUT STRESS URINARY INCONTINENCE

### Hypothesis / aims of study

**Background** Urinary incontinence (UI) has a hurtful effect on a woman's quality of life. The most prevalent type of urinary incontinence is the stress type that is affected by parturition, age, race, BMI, genetic factors, and previous pelvic surgeries.

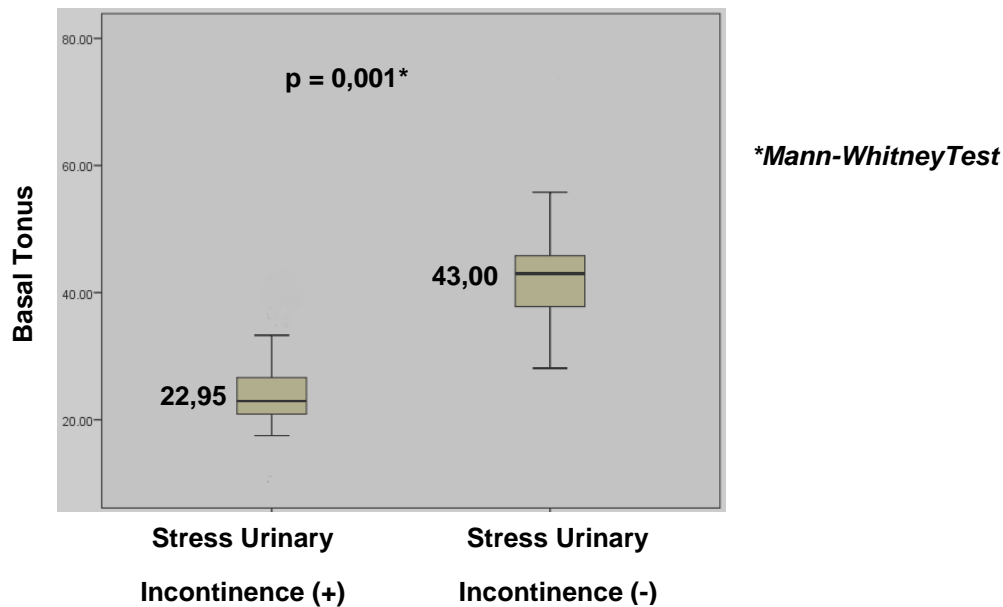
**Aims of study** to provide a foundational guideline in achieving therapeutic success in such patients by comparing pelvic floor muscle strength in patients with stress urinary incontinence (SUI) to other subjects without SUI with matching characteristics.

### Study design, materials and methods

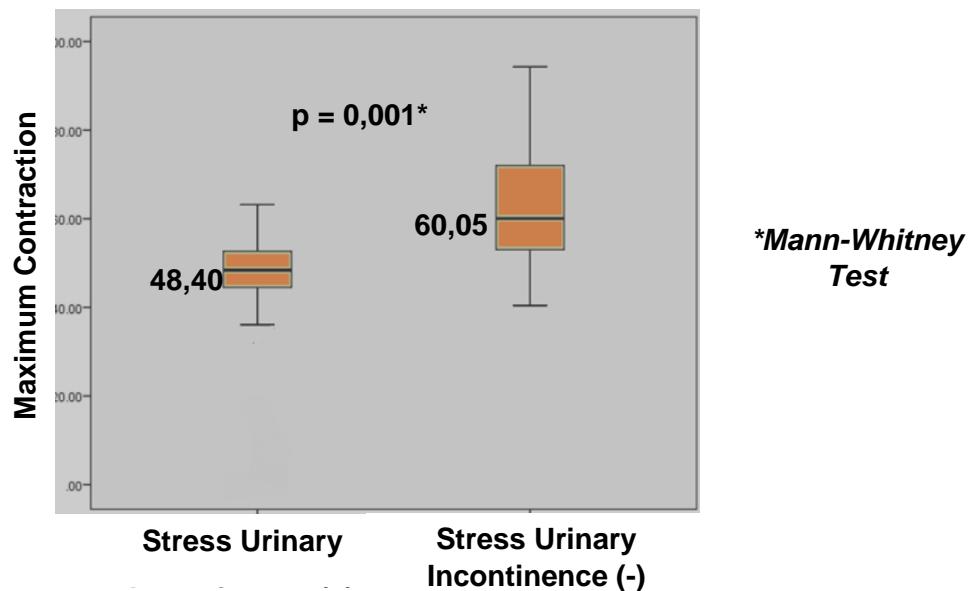
This is an observational analytic study with paired analytic comparative numeric cross-sectional approach that attempts to correlate the presence of SUI to the strength of levator ani muscle in all subjects that fulfill the inclusion criteria. The subjects were divided into two groups: one group without SUI (n=34) and another with SUI (n=36). The measured parameters were basal tonus and maximum contraction of levator ani muscle in women with and without SUI. The study was conducted in Hasan Sadikin General Hospital and its satellite hospitals from July – September 2015.

### Results

The median age of study subjects was 26.0 years in the group without SUI and 31.5 years in the group with SUI. The parity distribution among the subjects without SUI was as follows: 26 P1 subjects (26/34), 4 P2 subjects (4/34), 3 P3 subjects (3/34), and 1 P4 subject (1/34). The distribution in the subjects with SUI was as follows: 19 P1 subjects (19/36), 9 P2 subjects (9/36), 7 P3 subjects (7/36), and 1 P4 subject (1/36). The median BMIs were 20.81 in the group without SUI and 23.37 in the SUI group. Basal tonus were 43.00 cmH<sub>2</sub>O in the group without SUI and 22.95 cmH<sub>2</sub>O in the group with SUI (p=0.001). Maximum contraction strength were 60.05 cmH<sub>2</sub>O in the group without SUI and 48.40 cmH<sub>2</sub>O in the SUI group (p=0.001).



**Figure 1. Comparison of Basal Tonus of Levator Ani Muscle between Women with and without SUI**



**Figure 2. Comparison of Maximum Contraction of Levator Ani Muscle between Women with and without SUI**

Interpretation of results

The data showed a statistically significant difference in pelvic floor muscle strength between women with UI and women with SUI, supporting the hypothesis that there is a difference in pelvic floor muscle strength based on the urinary continence status in women.

Concluding message

Basal tonus and maximum contraction of levator ani muscle in women with SUI are lower than those in women without SUI.

**Key words: basal tonus, maximum contraction, levator ani muscle, stress urinary incontinence**

References

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Disclosures

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