

CHANGES IN URETHRAL PRESSURES ARE DEPENDENT ON POSTURE IN BOTH INCONTINENT AND CONTINENT WOMEN: A PILOT STUDY

Hypothesis / aims of study

To measure the magnitude of change in urethral pressures between the neutral and anterior pelvic tilt in both incontinent and continent women.

Study design, materials and methods

We conducted a initial study utilizing ten incontinent and ten continent women. Multichannel urodynamic studies were performed and urethral pressures were measured at a 300cc bladder volume. The urethral pressures were measured while resting and coughing in the neutral and 30° anterior tilt positions. Student t-test was used to compare means and a Wilcoxon paired t-test to measure changes in the mean urethral pressures.

Results

At rest, incontinent women had significantly lower urethral pressures than continent women both in the neutral and anterior tilt position. With coughing, the change from rest was significantly greater in an anterior pelvic tilt than the neutral position (40 mm H₂O vs 23 mm H₂O, p=0.047) when all women were grouped.

The incontinent group displayed a significant urethral pressure change between neutral and anterior pelvic tilt while the continent group did not. Incontinent group median urethral pressure change between rest and coughing in neutral position was 13.5 cm H₂O (Range 9-41) IQR: 11-25 and the anterior pelvic tilt urethral pressure change was 26 cm H₂O (Range 7-65) IQR: 15-49 WP t-test z = -2.501 p=0.012.

Interpretation of results

Changing postural positions affects the urethral pressures when coughing. This effect is greater in the incontinent subject but is also seen in continent women.

Concluding message

Preliminary results show that posture has a direct effect on urethral pressures and may have an impact on urinary incontinence.

<i>Specify source of funding or grant</i>	Calgary Health Region Adult Research Committee Funding
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	University of Calgary Conjoint Ethics Committee
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes