

## THE EFFECTS OF A HEATING PAD ON ANXIETY, PAIN AND DISTRESS DURING URODYNAMIC STUDY IN THE FEMALE PATIENTS WITH STRESS URINARY INCONTINENCE

### Hypothesis / aims of study

Although it is generally well tolerated, some patients regard urodynamic study (UDS) as an unpleasant and painful procedure. To evaluate the effect of a heating pad on pain and anxiety, distress during UDS in the female patients with stress urinary incontinence (SUI).

### Study design, materials and methods

74 female SUI patients who underwent urodynamic study between May 2015 and October 2015 were randomized to either the heating pad (n = 37) or control (n = 37) group. In experimental group a heating pad was applied on the patient's lower back side during UDS.

After UDS, all subjects completed the State-Trait Anxiety Inventory (STAI) form and assessed their degree of pain and distress during examination by the visual analogue scale (VAS, 0 – 10). Systolic and diastolic blood pressure, pulse rate were also checked before and after the procedure.

### Results

Mean age, procedure duration, pre and post-procedural pulse rate, systolic, diastolic blood pressure were statistically similar between the experimental and control group. The mean anxiety level (STAI) was significantly lower in the heating pad group than in the control group ( $p < 0.001$ ). The heating pad group showed significantly lower pain, distress score (VAS) ( $p < 0.001$ ,  $p < 0.001$ , respectively) compared with control group.

### Interpretation of results

A heating pad may enhance the patient's comfort and decrease the feelings of anxiety, pain and distress during UDS.

### Concluding message

Applying a heating pad on the back of the female patients with SUI during UDS is a simple, economical, and effective means to improve the feelings of anxiety, pain and distress.

Table 1. Baseline characteristics and pain, anxiety scores in female stress urinary incontinence patients according to applying a heating pad during urodynamic study.

Parameter	Heating pad (n=37)	Control (n=37)	p-value
Age (yr)	56.8±12.2	54.1±10.4	0.298
Body weight (kg)	59.2±10.0	58.8±9.8	0.861
Duration of procedure (min)	55.5±7.7	55.9±7.6	0.821
<b>Pre-procedural parameters</b>			
Systolic blood pressure (mmHg)	127.0±15.1	120.8±15.5	0.085
Diastolic blood pressure (mmHg)	80.5±11.8	78.1±9.4	0.329
Pulse rate (beats/min)	82.9±13.1	80.7±13.8	0.481
STAI	48.1±11.2	47.9±9.9	0.930
<b>Post-procedural parameters</b>			
Systolic blood pressure (mmHg)	130.0±18.1	130.0±18.4	1.000
Diastolic blood pressure (mmHg)	79.2±12.3	84.1±10.1	0.068
Pulse rate (beats/min)	76.2±12.0	76.8±9.9	0.817
Pain (VAS)	2.7±1.5	4.0±1.6	<b>0.000*</b>
Distress (VAS)	3.0±1.5	4.7±2.0	<b>0.000*</b>
STAI	30.9±7.5	42.5±10.1	<b>0.000*</b>

### Disclosures

**Funding:** none **Clinical Trial:** Yes **Public Registry:** No **RCT:** Yes **Subjects:** HUMAN **Ethics Committee:** Institutional Review Board of the Korea University Hospital **Helsinki:** Yes **Informed Consent:** Yes