

## EVALUATION OF A NOVEL UNDERWEAR WHICH SUPPORTS THE PELVIC FLOOR IN PELVIC ORGAN PROLAPSE PATIENTS.

### Hypothesis / aims of study

We have developed pelvic floor supportive underwear for pelvic organ prolapse (POP) women. This study investigates the impact of the underwear on the bladder and pelvic floor.

The purposes of the study are to verify objective efficacy in the support power of underwear in elevating the bladder and to verify subjective improvement of symptoms relating to POP.

### Study design, materials and methods

This was a pilot study conducted in Japan using the new support underwear (Pelvic floor supporter, Adam Medical LLC, Tokyo, Japan). The bladder shape was recorded in a standing position, at rest and during muscle strain using urethra-cystography with and without the new underwear.

Participants were 6 women with an average age of 69.5 years (55-88 years), recruited between October 2015 and January 2016 from university hospital outpatient clinics. The women wore the new underwear during the daytime for 2 weeks. The symptoms of POP were assessed based on the Japanese version of the P-QOL-6 (Prolapse Quality of Life Questionnaire) and the POPDI-6 (Pelvic organ prolapse distress inventory).

Statistical analysis was performed using a paired t-test to compare objective and subjective variables pre and post wear.  $p < 0.05$  was considered statistically significant for all tests.

### Results

Six Japanese women with POP, aged between 46 and 86 years, were included.

When the new underwear was worn, the bladder base was elevated by 10-25 mm (mean; 15,  $P < 0.05$ ) (Fig.1). After 2 weeks, symptoms of POP decreased significantly ( $P < 0.05$ ), even without the new underwear. There was no adverse event regarding the use of this underwear.

### Interpretation of results

Support underwear is shown to be an effective and safe conservative treatment option for POP in addition to a pessary. The advantage is easy to wear for elderly women with newly developed POP.

### Concluding message

The new support underwear is considered to be effective in elevating the bladder shape and reducing symptoms of POP.

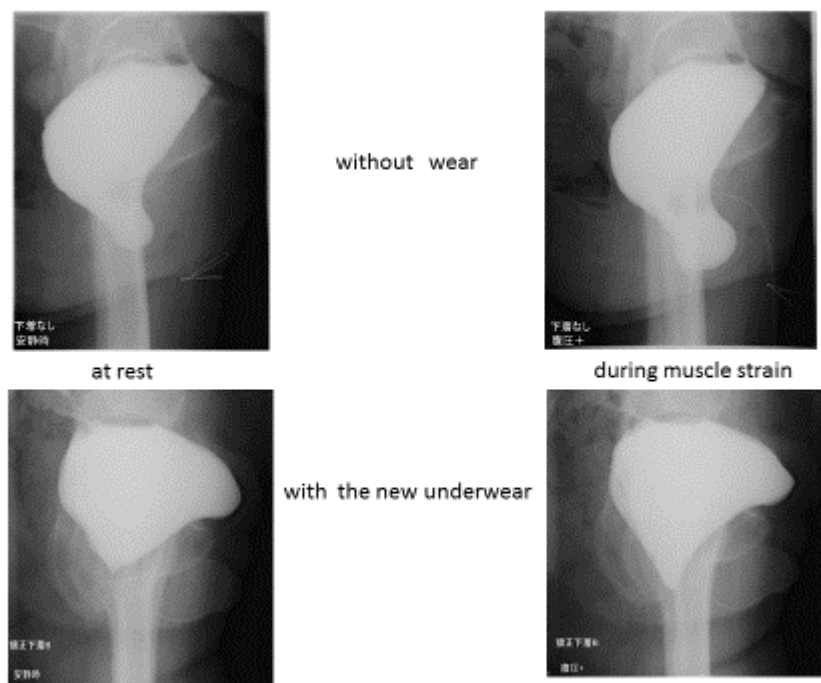


Fig.1 urethrocytography

### Disclosures

**Funding:** yes **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** University of Yamanashi Medical School Ethics Committee **Helsinki:** Yes **Informed Consent:** Yes