CORRELATION BETWEEN ALPP AND BMI IN ADULT FEMALE PATIENTS WITH STRESS URINARY INCONTINENCE

Hypothesis / aims of study
To identify the correlation between abdominal leak point pressure (ALPP) and body mass index (BMI) in adult female patients with stress urinary incontinence (SUI).

Study design, materials and methods
78 SUI patients were enrolled in this study, with an average age of 62.5±22.5 years. The BMI was recorded, and the ALPP was also measured. The correlation between each group was analyzed.

1. Body Mass Index (BMI): Measure the patient’s height and weight, then calculating BMI according to the formula (BMI = weight/height² kg/m²).

2. Urodynamic parameters: Multichannel urodynamic evaluation was performed according to the International Continence Society (ICS) guidelines on urodynamic equipment performance. Our study also included a pressure flow study, which included information about abdominal leak point pressure (ALPP). All urodynamic studies were done by one experienced urodynamic technician from the urodynamic center, and all urodynamic reports were interpreted by experienced urologist.

3. Statistical analysis: The data were calculated and presented as the mean and the standard deviation of the mean (SD) by SPSS 13.0 software. The correlations between BMI and these urodynamic parameters were tested by the Pearson and Spearman test. With statistically significant difference set as P<0.05.

Results
Our study found that the BMI was associated with the level of ALPP, which had a positive correlation between each other (r = 0.479, P < 0.05) (figure 1).

Interpretation of results
The BMI is higher, the SUI symptoms are more severe, and the patient’s ALPP is also increased, but the ability to control urine is reduced. Some other studies have shown that obesity on the one hand leads to a higher abdominal pressure load, on the other hand, a lot of fat accumulated in the obese patient’s pelvic tissues has made the effect to buffer the pressure, resulting in pressure transmission attenuation, eventually leading to decreased patient’s ability to control urine.

Concluding message
The BMI is positively correlated with ALPP, which is meaningful to the prevention and diagnosis of adult female patients with stress urinary incontinence. The BMI is more high, the SUI symptoms are more worse. The limitations of our study also be acknowledged as this is a retrospective data study, the types of data and available are limited.

Figure1

Disclosures
Funding: None Clinical Trial: No Subjects: HUMAN Ethics Committee: Ethics committee of West China Hospital of Sichuan University Helsinki: Yes Informed Consent: Yes