

THE EFFECTS OF BODY MASS INDEX ON THE SUCCESS RATE OF MID-URETHRAL SLING OPERATION: MINIMUM 36-MONTH FOLLOW-UP

Hypothesis / aims of study

There have been studies on how the body mass index (BMI) affects the success rate of mid-urethral sling operation, but in most studies, duration of follow-up was not sufficiently long. Therefore, we examined the effects of BMI on the success rate of mid-urethral sling operation in the patients followed up for minimum 36 months.

Study design, materials and methods

We retrospectively analyzed 143 patients who received mid-urethral sling operation and were followed up for at least 36 months. According to BMI at the operation, the patients were divided into normal weight (18.5-23.0 kg/m²; Group I), over-weight (23.1-27.5 kg/m²; Group II), and obesity (27.6 kg/m² or higher; Group III). Preoperative evaluation including symptom questionnaire, physical examination and urodynamic study were performed. Patients received the retropubic (16.8%) or trans-obturator (83.2%) mid-urethral sling operations. Treatment success was defined as 'cured' (absence of subjective complaint of leakage and absence of objective leakage on the stress test) or 'improved' (rare leakage and overall satisfaction regardless of the stress test). Subjective satisfactions were surveyed using administered questionnaire as follows: 'very satisfied', 'satisfied', 'unchanged' or 'dissatisfied'.

Results

Of the patients, 48 (33.6%) were in group I, 77 (53.8%) in group II, and 18 (12.6%) in group III. Each group showed statistically significant difference only in age (years) (group I: 51.7, group II: 56.6, group III: 58.1), number of vaginal delivery (2.4, 2.7, 3.7), menopause without estrogen replacement (%) (37.5, 67.5, 61.1), and mixed urinary incontinence (%) (14.6, 36.4, 55.6) among preoperative variables. No significant differences were found among the three groups in the intraoperative and postoperative complications. The mean duration of follow-up was 51.3 months (range 36 to 84) and it was not different among the groups. In all the patients, the success rate was 88.8% including 'cured' (79.0%) and 'improved' (9.8%). There was no significant difference among the three groups for success rate (%) (93.8, 88.3, 77.8; P=0.182, Pearson Chi-square test). The percentages of 'very satisfied' were 59.6%, 50.6%, and 58.8%, respectively, and those of 'satisfied' were 27.7%, 37.7%, and 23.5%, showing no significant differences among the groups (P=0.329). In the multivariate logistic regression analysis, no significant variables were identified for the prediction of success, although idiopathic detrusor overactivity showed lower incidence in the patients with treatment success (P=0.083).

Interpretation of results

To identify the effect of BMI on success rate of mid-urethral sling operation, longer follow-up duration after surgery might be necessitated due to the mechanism of how BMI affects the pelvic musculature and organs. In women followed up for minimum 36 months, preoperative variables including BMI were not significantly associated with success rate of operation.

Concluding message

Over a mean follow-up of 51 months, BMI did not have a significant effect on the success rate of mid-urethral sling operation and the patients' satisfaction.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</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>	Institutional Review Board of Seoul National University Bundang Hospital
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No