

## OBESITY AS A RISK FACTOR FOR ADVANCE SLING FAILURE

### Hypothesis / aims of study

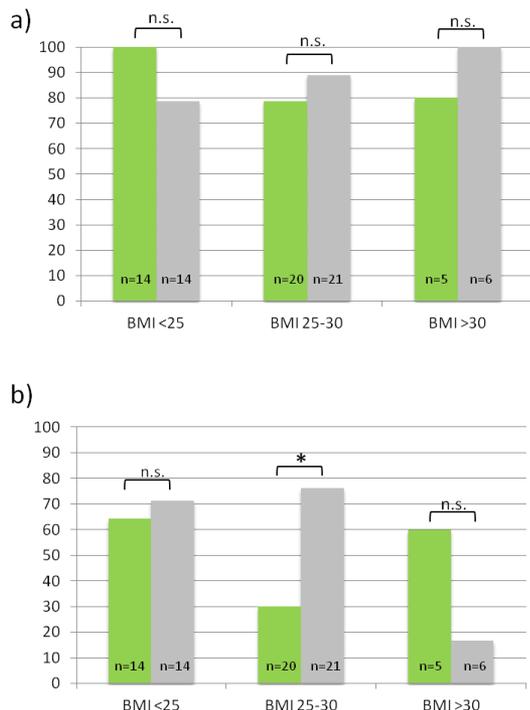
The transobturator retroluminal repositional sling suspension was first introduced in 2006 for the treatment of male stress urinary incontinence (SUI). The AdVance XP Male Sling System was marketed in 2010. Besides other innovations, its sling arm length has been increased to better accommodate with a greater body-mass-index (BMI) and anchors were added to improve capability in the early postoperative period to reduce early failure due to sling loosening or sling slippage. Aim of this prospective single center study was to analyze the impact of BMI on the outcome of the AdVance respectively AdVance XP sling.

### Study design, materials and methods

We prospectively analyzed a total number of 90 patients [n=39 (AdVance), n= 41 (AdVance XP)]. Different subgroups depending on the respective BMI were formed as follows: normal weight [ $<25.0\text{kg/m}^2$ , n=14 (AdVance), n=14 (AdVance XP)]; overweight [ $25.0\text{-}30.0\text{kg/m}^2$ , n= 20 (AdVance), n=21 (AdVance XP)]; obese [ $>30.0\text{kg/m}^2$ , n=5 (AdVance), n=6 (AdVance XP)]. Pad use was evaluated after 3 months and maximum follow-up. Additionally, adverse events (AE) were classified using the Clavien-Dindo-scale. Data was analyzed using Fisher's exact test, chi-squared test and Wilcoxon test. A p-value below 0.05 was considered statistically significant.

### Results

Results are summarized in figure 1. Median follow-up was 755 days (316 - 1006) for the AdVance sling group and 385 days (155 - 801) for the AdVance XP sling group. After 3 months, 78.6% (AdVance) vs. 88.9% (AdVance XP) of the normal weight patients were cured, whereas 21.4% (AdVance) vs. 11.1% (AdVance XP) failed or only slightly improved ( $p=0,631$ ). At maximum follow-up 45.0% (AdVance) vs. 90.5% (AdVance XP) of the overweight patients were cured, whereas 55.0% (AdVance) vs. 9.5% (AdVance XP) failed or slightly improved ( $p=0.002$ ). In contrast, statistical analysis of the obese and normal weight patients showed no statistical differences after 3 months as well as after maximum follow-up. Analysis of AE revealed 28.6% (AdVance) vs. 21.4% (AdVance XP) mild-to-moderate AE for normal weight patients, 15.0% (AdVance) vs. 9.5% (AdVance XP) mild-to-moderate AE for overweight patients and 20.0% (AdVance) vs. 33.3% (AdVance XP) mild-to-moderate AE for obese patients after 365 days respectively (not significant).



**Figure 1:** Cure rates depending on pad usage after 3 months (a) and after median last follow-up (b) for AdVance (green) and AdVance XP (grey) sling respectively (\*:  $p<0,05$  AdVance vs AdVance XP; n.s. = not significant).

### Interpretation of results

In the longer-term follow-up, the AdVance XP shows better results in overweight patients. In contrast, no benefit could be seen for normal weight and obese patients in our cohort. Subgroup analysis of adverse events showed no statistical differences. One might speculate that patients with a BMI of 25.0 to 30.0  $\text{kg/m}^2$  profit the most from the better fixation of the new anchors of the AdVance XP sling.

#### Concluding message

Considering the low rates of mostly mild-to-moderate adverse events and the high continence rates, both the AdVance as well as the AdVance XP Male Sling System represent safe and efficient treatment options for male urinary stress incontinence.

#### Disclosures

**Funding:** none **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Ethics committee of Ludwig-Maximilians University, Munich **Helsinki:** Yes **Informed Consent:** Yes