Male Sling Adjustment: Can the Retrograde Leak Point Pressure Help to Reduce Postoperative Urethral Lesions?

Introduction and Objecitve: Objective was to evaluate the influence of a retrograde leak point pressure (RLPP) measurement during implantation of an adjustable bulborurethal male sling on the postoperative urethral lesion rate.
Materials and Methods: Retrospective analysis of two subgroups of patients who were implanted an adjustable male sling (ARGUS®) between 2005 and 2009 at our department for treatment of a moderate to severe stress urinary incontinence (SUI). We classified the groups as **I:** intraoperative RLPP adjustment of more than 40cm H_2O (n=21) or **II:** intraoperative RLPP adjustment 40cm H_2O or lower (n=59). Both groups where analyzed for **a:** postoperative urethral lesions **b:** differences in the postoperative dry rate and **c:** need for postoperative adjustment. Dry rate was defined with a 20 min pad weight of 0-1g.
Results: Mean Follow up (FU) was 2.6 years for both groups (FU group **I:** 3.2 years, FU group **II:** 2.0 years). The RLPP was adjusted to mean 46.7 cm H2O (range: 41-90 cmH2O) in group **I** and to 34.2 cm H2O (range 20-40cmH2O) in group **II**. Average surgery time was 46 min for both groups (range: 27-105min). Postoperative urethral lesions occurred in both groups: 7 urethral lesions (33.3%) in group I versus 3 lesions (5.1%) in group II. The postoperative 20min Pad Test was decreased from mean 45.4g to 0.6g (median:0g, range 0-4g, dry rate 80,9%) in group **I**, while in group **II** the preoperative pad weight from mean 27.6g could be reduced to a mean of 3.4g (median:0g,range 0-90g, dry rate 84.7%). A similar postoperative adjustment rate was found in both subgroups, but the differences were without statistical significance: A later loosening of the sling was necessary in 9.5% (n=2) at group I versus 11.8% (n=7) in group II; A later sling tightening was needed in 28.2% (n=6) in group I versus 32.2% (n=19) in group II.
Conclusions: The measurement of the RLPP is a feasible tool to objectify urethral pressure increase while sling adjustment in male stress urinary incontinence. There seems to be no influence on later sling adjustments - due this is necessary for functional changing or changing demands of patients – while the rate of postoperative urethral lesions was significant lower if adjustment was done with a RLPP of 40cm H_2O or lower. Lower RLPP interestingly showed no correlation with the dry rate.