transvaginal tape (TVT), transobturator tape (TOT) and the combination.

Materials and methods: Effect sizes of pre-op and post-op questionnaire scores for overall sexual function and orgasm from the studies were calculated. Random-effects models were selected for Meta analyses. Statistical analysis involved determination of the ratio of total heterogeneity among various studies to total variability. The difference of overall sexual and orgasm functions were calculated by subtracting post-mid-urethral sling scores from pre-sling scores. Forest plots of effect sizes for overall sexual function were performed.

Results: 67% of mid-urethral sling procedures analyzed showed no change or improvement in sexual function post-op. Statistical analysis for the difference of overall sexual function showed the mean post-op score was statistically significantly higher than mean pre-op score. In contrast, about 33% of studies analyzed for orgasm function showed overall improvement in orgasm after the procedure. Statistical analysis for the difference in orgasm showed the mean post-op score was significantly higher than mean pre-op score. For TVT alone, mean total sexual function and orgasm post-op scores were significantly higher than pre-op scores. For TOT alone, the mean total post-op score was significantly higher than pre-op, however the mean orgasm post-op score was not significantly higher than pre-op, mainly due to large variation in TOT data. Although the mean total and orgasm effect sizes were similar for TOT and TVT, the TOT effect sizes have much larger variations than TVT.

Conclusions: Data support that a subgroup of women who derive primary orgasmic function from vaginally-elicited orgasms, through penetration or stimulation of the peri-urethral female prostate region, may lose this response following sling placement. The dissection for and placement of the mid-urethral sling clearly can compromise neural integrity of anterior vaginal wall, peri-urethral female prostate tissue.

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EXTRACORPOREAL IN-SITU ACTIVATION OF PENILE PROGENITOR CELLS

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Objective: The molecular mechanisms underlying therapeutic effect from Low Intensity Extracorporeal Shock Wave Therapy (Li-ESWT) for erectile dysfunction (ED) are far from well clarified. To study the feasibility of extracorporeal in-situ penile progenitor cell activation by Li-ESWT *in vivo*, and confirm the activation on Schwann cells and endothelium in vitro.

Material and Methods: Cohort analysis of young and old male Sprague-Dawley rats treated with 5-ethynyl-2'-deoxyuridine (EdU) pulse followed by Li-ESWT, as well as the Schwann cells and endothelium treated with Li-ESWT. Thirty minutes before Li-ESWT treatment each rat received intraperitoneal injection of EdU. Li-ESWT was applied in different dosages at very low (0.02 mJ/mm^2, 3 Hz for 300 pulses) or low (0.057 mJ/mm^2, 3Hz, 500 pulses) energy levels. The Schwann cells and endothelium were treated with very low energy in vitro. At time points of 48 hr or 1 week post-Li-ESWT, penile tissues were harvested for histological study to assess the EdU+ cells and Ki67. Cell proliferation, ki-67, ErK1/2 phosphorylation and translocation, and angiogenesis were checked.

Results: Li-ESWT significantly increased EdU+ cells within penile erectile tissues ($P<0.01$) at 48 hours and 1 week. There were more cells activated in young animals than in old animals, and the effect was dosage dependent. Most activated cells were localized within sub-tunical spaces. The chief limitation in the current project is the short time period of study. It is necessary to perform additional longer term studies to demonstrate the cell fate of those cells activated by Li-ESWT in penile tissue. Li-ESWT activated SCs to proliferate that related to ErK1/2 signaling and activated endothelium for angiogenesis.

Conclusions: Extracorporeal *in-situ* penile progenitor cell activation is a novel, noninvasive therapeutic approach to improve erectile function through activation of endogenous stem/progenitor cells.

Disclosure: Work supported by industry: no. The presenter or any of the authors act as a consultant, employee (part time or full time) or shareholder of an industry.

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TARGETING THE MICROTUBULE CYTOSKELETON TO PROMOTE NEURAL REGENERATION AND IMPROVE ERECTILE FUNCTION OUTCOMES AFTER CAVERNOUS NERVE INJURY IN A RAT MODEL OF RADICAL PROSTATECTOMY

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Objective: Following radical prostatectomy (RP) the majority of men suffer erectile dysfunction (ED) primarily through mechanisms resulting in damage to the cavernous nerve (CN). Growing evidence suggests that the microtubule (MT) cytoskeleton can be manipulated in order to promote nerve regeneration. We recently described that the protein, Fidgetin-like 2 (FL2), is a negative regulator of microtubule dynamics. In the studies described here, we tested the hypothesis that depletion of FL2