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Title: LONG-TERM EFFECTS OF THREE DIFFERENT ANTI-INCONTINENCE PROCEDURES ON THE POSTERIOR COMPARTMENT

Aims of Study:

To compare the effects of three surgical procedures for SUI -- suburethral sling, retropubic urethropexy, and transvaginal needle suspension -- on the risk of recurrent posterior compartment prolapse.

Methods:

53 suburethral slings, 23 needle suspensions, and 34 retropubic urethropexy procedures were performed within a cohort of women with advanced uterovaginal prolapse reaching to or beyond the hymenal ring. Subjects were initially recruited for a randomized prospective trial evaluating the effect of polyglactin mesh during anterior and posterior colporrhaphy. This secondary analysis was conducted to compare the effects of these anti-incontinence procedures on the long-term risk of recurrent prolapse in the posterior compartment.

Results:

Long-term follow up was obtained in 110 women, at a mean of 418 days (286-687). There was no difference between the mean follow-up intervals of the three groups. Recurrent rectoceles were significantly more common after suburethral sling procedures compared with the retropubic urethropexy (15% vs. 2.9%, $P=0.038$); there were no differences in the rates of recurrent enteroceles (0% vs. 5.9%, $P=0.16$) or vaginal vault prolapse (3.9% vs. 0%, $P=0.16$). When compared to women who underwent transvaginal needle suspension, sling recipients trended towards higher rates of recurrent rectoceles (15% vs. 4.3%, $P=0.108$); no enteroceles were seen in either group, and vaginal vault prolapse was rare (3.9% versus 0%, $P=0.16$). Comparing sling recipients to those undergoing no anti-incontinence surgery, rectoceles recurred in 15% versus 9.1% ($P=0.40$), enteroceles recurred in 0% versus 3.0% ($P=0.32$), and vaginal vault prolapse recurred in 3.9% versus 9.1% ($P=0.37$). ANOVA revealed a significant difference in the rate of rectocele recurrence at 1 year, across the three groups ($F=4.09$, $P=0.04$)

Conclusions:

Retropubic urethropexy and needle suspension procedures have been generally considered a risk factor for recurrent posterior compartment prolapse, by increasing the 'exposure' of posterior supports to intraperitoneal pressure. Our findings suggest that of these three operations for SUI, suburethral slings appear to confer the highest risk of rectocele recurrence at 1-year.