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EFFICACY OF SLINGS FOR STRESS URINARY INCONTINENCE: SYSTEMATIC REVIEW

Aims of the study: The aim of the study was to determine the effects of sling operations on stress or mixed urinary incontinence in comparison with other management options

Methods We conducted a Cochrane systematic review. We searched the relevant literature for randomized clinical trials on surgical treatment for urinary stress incontinence. The search included the electronic database MEDLINE and The Cochrane Incontinence Group's trials register. Date of most recent search: January, 2000. The selection criteria used in the review were randomized or quasi-randomized trials that included sling surgery in at least one arm of the study. The quality of allocation method was scored, A, if it was clearly described in the text and its method was adequate. If randomization was stated but not detailed, the allocation was scored B. Outcome measures included cure and improvement rates, pad testing, urodynamic evaluation pre and post operation, quality of life assessment and complication rates. Both reviewers independently extracted data and assessed trial quality.

Results Only five eligible randomized trials were identified. 206 patients were studied - 126 treated with slings and 80 with other procedures (abdominal retro pubic-Burch/MMK and needle-Stamey suspensions). In one trial, different types of sling were compared with each other. Six types of slings were included Teflon, PTFE, Goretex, Porcine dermis, lyophilized dura mater and rectus fascia. There were no comparisons of sling with anterior repair, laparoscopic colposuspension, peri urethral injections, artificial sphincters or conservative management. There is one identified ongoing trial of Tension-free vaginal tape (TVT) versus Burch colposuspension, but results are not yet available. When compared with abdominal retropubic suspension, slings had similar results. Two small trials showed no difference between Teflon sling and MMK procedure, or PTFE sling and Burch colposuspension at early follow up. Late results were not described. Another trial, with 72 patients, reported

similar results in terms of failure rate (3/36 or 8% for dura mater sling, 5/36 or 14% for Burch) at late assessment (32-48 months). The incidence of voiding problems was non-significantly higher for sling, with more voiding difficulty and urge symptoms. On the other hand, there were non-significantly more cases of enterocele in the Burch group. Other complication rates were similar. All trials failed to give adequate information for other outcome measures. One small (n = 20) trial compared porcine dermis sling with Stamey needle suspension No significant differences were encountered in early and long term follow-up, but higher complication rates were reported for slings (blood loss, wound infection and pulmonary embolus). Only one trial compared synthetic (Goretex) with autologous (rectus fascia) slings. The results were better for Goretex, but there were two patients (12,5%) with sling erosion to the urethra.

Conclusions: In general, the quality of trials was poor (eg unclear allocation method of randomization, low numbers of cases studied, short follow-up, and scarce information on outcome measures). These characteristics do not allow confident conclusions about the effects of slings when compared with other management. The few data available suggest that slings are as good for stress incontinence as the comparison procedures (abdominal suspension, needle suspension and different types of sling) but with higher morbidity. There is an urgent need for higher quality trials of slings for stress incontinence to provide better scientific evidence for safer therapeutic decisions.