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LOW COST POLYPROPYLENE SLING PROCEDURE FOR CORRECTION OF STRESS URINARY INCONTINENCE: A POSSIBLE SOLUTION FOR DEVELOPING COUNTRIES?

Hypothesis / aims of study

To verify the viability of utilizing hospital-made Raz polypropylene mesh sling as an alternative for treatment of female stress urinary incontinence (SUI), based on cost-effectiveness analysis.

Study design, materials and methods

From February 2003 to June 2004, a total of 30 women with urinary stress incontinence symptoms were evaluated and randomized to surgical treatment with polypropylene mesh sling, as proposed by Raz and cols (1). Clinical evaluation and physical examination were assessed and urodynamic examination was performed in all. Patient's characteristics are mean age of 55,2 years (30-80y), symptoms duration from 6 months to 25 years, numbers of pregnancies ranging from two to nine with 80% of vaginal deliveries (natural or forceps). Seventeen patients (57%) had symptoms of urgency or urge incontinence associated with SUI. Urodynamics revealed detrusor overactivity (DO) in only these 17 patients, 6 of them promoting urinary leakage. In 26 patients (87%), the Valsalva leak point pressure (VLPP) was less than 60cmH2O. Ten patients had concomitant surgical repair of associated pelvic organ prolapses at the time of the sling procedure. All patients underwent sling procedure utilizing a suburethral polypropylene mesh, with polypropylene sutures in the extremities passed to the abdominal area by Stamey needles after disruption of the endopelvic fascia. From a prolene mesh (Ethicon - Johnson & Johnson) 12 x 12 inches (30cm x 30cm), were produced 60 meshes (7cm x 2cm), costing approximately US$ 5 a piece. Each one was sterilized individually.

All the procedures were done under spinal anesthesia and mean operation room time was 70 minutes (ranging 30-100min) for the sling procedure alone and 100 minutes when the prolapse repair was associated. Patients were discharged from the hospital in the following day, under cystostomy drainage until an efficient void were obtained. Mean follow-up was 15 months, ranging from 10 to 25 months.

Results

Twenty-nine of the patients (96,7%) are dry and satisfied in the follow-up. Only one (3,3%) still presents urinary leakage. One patient developed *de novo* urgency and 6 with pre-operative mixed incontinence (35%) remains with urgency, minimized by anticholinergic. There was only one situation of assymptomatic partial mesh vaginal extrusion (3,3%) noted on a routine physical examination, 6 months after surgery. She was treated by simply removing the extruded portion on an ambulatory basis, without mucosal resection with favorable healing and remains normal after 8 months.

Interpretation of results

Polypropylene mesh sling procedure, as described for correction of female SUI, seems to promote results and complications rate comparable to the products available in the market, but at smaller costs; even though the limitation of our short time of follow up.

Concluding message

Self-developed polypropylene mesh can be an attractive low-cost and safe option for treatment of female SUI in developing countries with financial limitations for medical treatment.

Reference

1. Prospective Analysis Of Patients Treated With A Distal Urethral Polypropylene Sling For Symptoms Of Stress Urinary Incontinence: Surgical Outcome And Satisfaction Determined By Patient Driven Questionnaires. *J Urol 170(3): 857-863, Sep 2003*.