Retrospective evaluation of male slings for patients with urinary incontinence after radical prostatectomy – one surgeon’s experience

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Introduction: Stress urinary incontinence is one of the main complications after radical prostatectomy (RP) with a significant percentage of patients reporting bothersome incontinence >1 year after surgery. Risk factors for post-prostatectomy UI (PPI) are advanced age, surgical technique, and RP associated with pelvic radiation or a previous TURP. Rates of SUI after external beam radiation therapy for prostate cancer have been reported between 1% and 16%, and can occur as a late complication years after treatment.

First attempts of male incontinence treatment after prostatectomy were introduced by Marshall and associates in 1946. They concluded that compression and elevation of perineal region can strengthen sphincter competence. In 1998., Schaeffer and associates published first comprehensive study showing good results of PRPUI treatment with slings. This type of surgery passed through different technical modifications, and different models of slings were introduced.

In recent years, several minimally invasive slings for treatment of post-prostatectomy stress urinary incontinence were introduced. The retrourethral transobturator and retropubic sling suspension was introduced in 2006.

OBJECTIVE

Assessment of one surgeon’s results in surgical treatment of urinary stress incontinence of patients with radical prostatectomy applying transobturator and suprapubic slings.

PATIENTS AND METHODS

From February 2010. - February 2014., 20 patients, age 57 – 76, with moderate and severe stress urinary incontinence (SUI) were treated surgically. All patients previously had radical prostatectomy due to prostate cancer. Among them, 18 had retropubic radical prostatectomy (RRP), and 2 patients had laparoscopic radical prostatectomy (LRP). No radiation therapy was administered after radical prostatectomy, and all 20 patients had level of prostate specific antigen (PSA) below 0.04. All patients performed Kegel exercises before surgery, some of the patients had electrostimulating therapy, but conservative treatment had no satisfactory results.
All patients had SUI evaluation using twenty minutes PAD test, before and after the surgery, in order to evaluate results of surgical intervention. It was concluded that 12 patients had severe urinary incontinence and 8 moderate. All patients had sling placements 6 months after radical prostatectomy, at the earliest.

RESULTS

All 20 patients with stress urinary incontinence (PRPUI) had Argus slings placement after radical prostatectomy. Patients were followed for a longer period of time, 6 months minimum, 48 months maximum.

12 patients (60%) diagnosed with severe PRPUI had suprapubic sling placement, and 8 patients (40%) with moderate PRPUI had transobturator sling placement. Two patients had simultaneously semirigid penile prosthesis placement. 18 patients (90%) had negative, dry PAD test after surgery, one patient (5%) had positive PAD test, and one patient (5%) who previously had Advance transobturator sling placement with no positive results, had sling removed due to an infection. 6 patients (30%) needed additional sling adjustment, performed between 9 – 21st day after the surgery.

DISCUSSION

Main reasons for stress urinary incontinence after radical prostatectomy are intrinsic sphincter deficiency and bladder disfunction9,20. Indications for surgical treatment of PRPUI are moderate to severe SUI. Beside slings, optional procedures include injection of bulking substance and artificial sphincter (AUS). Periurethral injections showed no long-term results21, at the same time AUS showed excellent long-term results, with almost 90% of patients being content22. One of modality of treating SUI is penile clamp, but other solutions are preferred as a result of damaged self-esteem. In addition to that, patients with active sexual life are not penile prosthesis candidates. Argus slings introduction brought many novelties. Tension regulation under vision with cystoscope, make this procedure very precise, and possible adjustment can be performed even in local anesthesia. Analysing other studies with large number of patients23,34, this procedure was established as successful, in over 80% of cases, and in certain number of patients (15%) comparing to our study, removal of slings was needed due to infection or urethral erosion. We assume that low percent of complication in this series is due to surgical technique and urethral access without extensive release of urethra and access through muscle bulbospongiosus, compared to other types of slings. This method requires long-term follow up as bulbar muscles compression can cause atrophy and incontinence. On the other side, we assume that additional strengthening is possible after longer period of time. In our series, only one patient had sling removed, having previous unsuccessful Advance sling placement. Complications after Advance slings placement are present with 24% patients, urine retention being the most common25. Other studies show high number of complications with Argus slings, up to 35% of all operated patients, and as a result of that, this procedure is poorly marked26.

CONCLUSIONS

We concluded that Argus slings, suprapubic or transobturator are an effective and safe treatment for PRPUI. This procedure is minimal invasive and our results clearly demonstrate that both heavy and moderate incontinence responds well.

SUMMARY

RETROSPEKTIVNA EVALUACIJA REZULTATA SLINGOVA ZA PACIJENTE SA URINARNOM INKONTINENCIJOM PROSLE RADIKALNE PROSTATEKTOMIJE-ISKUSTVA JEDNOG HIRURGA


Ključne reči: prostatektomija, urinarna inkontinencija, slang

REFERENCES:


