Despite the fact that prostate cancer (PCa) incidence has remained constant over the years after PSA introduction, PCa still represent 14% of all cancers. Despite the fact that prostate cancer (PCa) incidence has remained constant over the years after PSA introduction, PCa still represent 14% of all cancers.

The rates of urinary incontinence are variable but up to now it seems there is no big difference regarding the way the procedure is performed, either open or laparoscopic/robot-assisted. In the long-term, patients undergoing prostatectomy can have a urinary incontinence in a rate of about 18% at 5 years after surgery. 5-10% of men with post-prostatectomy incontinence (PPI) are expected to be treated with surgery. However, it is a common thought to blame the surgery as the sole cause of urinary incontinence, but there are multiple factors that play a role and are responsible for this huge disparity of presentation of urinary incontinence. The aging process itself is responsible for this. In addition, not only incontinence urinary incontinence is 11% in 4. In addition, not only incontinence is responsible for the huge disparity of presentation of urinary incontinence. The aging process itself is responsible for this.

There are several factors after surgery that can alter bladder and outlet dynamics such as reduced bladder outlet resistance induced by long-term intraocular pressure, inflammation and fibrosis, surgery-linked altered bladder wall geometry, and partial surgical decentralization of the bladder which can also be responsible for overactive bladder symptoms and impaired detrusor contractility caused by transient bladder denervation. On the other hand, the added value of adjuvant radiation therapy to surgery can have a positive impact on postoperative urinary continence, especially in patients with non-locally advanced prostate cancer is offset by the higher chance of urinary complications such as a consequence of stress urinary incontinence and overactive bladder with the great dilemma of the best management choice for each one for whom one should start first. Another fact that is important is the status of the bladder before surgery. It is well known that the relation of bladder quality and urinary symptoms after surgery. It sounds logical to believe that if bladder deterioration occurred because of long-term bladder outlet obstruction before surgery, the outcome of urinary symptoms after surgery can be compromised but the literature is poor in this matter.

The best way to deal with this patients is in a multi-disciplinary approach in a clinical care center, that is accountable for the total care for a medical condition and its complications; it is mission driven, process oriented, and with standardized parameters. This is translated in added value for patients.

Diagnostic workup

The diagnostic workup must include a detailed history of lower urinary tract symptoms with validated questionnaires, a bladder diary with and without clamp, cystometry and urodynamic study, prostatic mechanical test, 24-hr pad test for three days because the amount of leakage can suggest the type of procedure that can work better. Video/urodynamics is mandatory and can help identify detrusor underactivity, overactivity, determine the degree of leakage and also be helpful in determining the degree of mobility of the bulbular urethra, and in selecting patients that can benefit any type of procedure such as a retropubic sling. Cysptoscopy is also important to check for sphincter function and to rule out strictures.

With this in mind, the decision-making process is more straightforward taking into account the severity of the incontinence, the co-morbidities, the willingness to accept a second procedure after prosthetic surgery, the adversity of the patient to have a prosthetic device, his own biases and our personal biases towards any procedure, especially those with whom we were trained or are more familiar. Despite all these facts, once the type of incontinence and the severity are identified it seems advisable to start dealing with the problem that is most bothering in the first place.

Independent of the type of incontinence, there is evidence that suggests that pelvic floor rehabilitation after radical prostatectomy can improve outcomes but more, importantly, can reduce the time to gain continence in those patients who will recover it.

In a center of clinical care for prostate cancer, it seems advisable to bring the physiotherapist into the team and include an educational session before surgery and standardized sessions of pelvic floor rehab after the surgical procedure which starts once the catheter is withdrawn. This will allow those patients who will recover continence by themselves less than three months. If this is not the case, after a prudential but arbitrary timeframe of up to 12 months, the decision of an invasive procedure has to be determined.

SUI surgery

Surgical procedures are considered the long-term treatment for the majority of patients with moderate and severe Stress Urinary Incontinence (SUI). The history of SUI surgery after prostatectomy has a broad variety of surgical procedures based on the theories that were the trend at the time. The main principle of any surgical procedure for incontinence is to gain urinary continence without endangering the micturition act with an acceptable rate of complications.

Current and past surgical procedures have failed in achieving a complete successful gain in urinary continence. This failure varies depending on the way continence was measured; however, the failure rates reflect in part the shortcomings in understanding the pathophysiologic of PPI. There are two procedures that have passed the test of time or there is a growing body of evidence in its favor, i.e., male sling and the artificial urinary sphincter (AUS). Male slings belong to three main categories: suburethral bone-anchored slings (no longer in use), Transobturato retroluminal slings (RTS) and adjustable slings. The mechanism of action of the retroluminal sling is hypothesized to rely more on repositioning of the descended posterior and sphincteric urethra than on direct compression of the bulbular urethra. Only men with adequate bladder neck and proximal urethral mobility should be offered retroluminal sling surgery, whereas those with an immobile bladder would be more appropriately treated with a compressive quadratic sling or AUS.

The ideal candidate for a retroluminal sling is the patient who do not want a mechanical device, who are not interested in or able to improve stream (residual urodynamic function), less than 140 gr in 24-hr pad test and a normal bladder capacity and compliance on urodynamic.

A meta-analysis of male slings showed best results seen in studies in well selected men with mild to moderate incontinence with a trend to loss of efficacy over time. Long-term follow-up have shown a continence rate of about three in every four cases.

What is important is to realize that despite the fact all of the slings have level III evidence, some of them have longer follow-up and more patients treated and enrolled in clinical trials over the others. It is the physician’s own judgement based on the best evidence and experience which drives the selection of any type of sling in particular. One special consideration is the patient who undergoes adjuvant radiation therapy after surgery. There is some evidence that in those patients the outcome of a male sling is compromised.

AUS

Why is the AUS the gold standard despite the fact no RCTs are available? The answer is simple. It passed the test of time after more than 35 years of use. There are few modifications of the original device since its introduction in the early 1970s, it has standardized and reproducible surgical technique, there are known complications (but the way to deal with them) and there is nothing yet better with regards outcomes.

Recent evidence has shown that the perineal approach may have some advantages over the penoscrotal for primary and secondary procedures. When the sphincter fails, the need for a tandem cuff is more frequent for the penoscrotal (30.0%) than for the perineal (1.2%). Some patients can have a loose cuff instead of uretal atrophy and can benefit more with cuff downsize and proximal relocation than a tandem cuff. Tandem is associated with higher erosion rates. The introduction in 2010 of the 3.5 cm. cuff had a favorable impact on continence outcomes4, however in irradiated patients or concomitant penile prosthesis surgery have been identified as factors associated with a greater rate of erosion for the 3.5 cm cuff4.

In the coming years, the higher life expectancy of the prostate cancer survivors will confront the urologist to more challenging cases, second procedures after failed incontinence surgery and long-term failures and complications. The half time failure for the AUS is eight years in average. Mechanical failure can occur as well as infection or late erosion. If this is the case, there is evidence that urethral repair is better than leaving the erosion for second healing regarding structure formation. Transcorporal AUS is an excellent salvage approach for patients who have had prior cuff erosion.

PPI is a growing challenge for the urologist who will face more cases as the life expectancy increases. It is our duty to deliver the best care for these patients.

References


Editorial Note: Due to space constraints the reference list has been shortened. Interested readers can request for the complete list by sending an email to communications@uroblog.org.

Sunday, 13 March 2016

Sunday, 13 March 2016

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