



Long-Term Complications Conversing in Separate Nosologies after Surgical Interventions for Beneficial Prostate Hyperplasia

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Abstract: Adaptation of the classification of surgical complications by Clavien P.A.-Dindo D., proposed in relation to cholecystectomy, to an adenomectomy operation will make it possible to systematize a variety of surgical complications arising from this operation. In addition, timely detection and full accounting of complications allows improving the immediate and final results of surgery.

Keywords: prostate, adenomectomy, hemostasis, lagochilus, surgical complications.

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Relevance. Long-term complications of adenomectomy include stricture of the urethra, stenosis of the bladder neck, stricture of the orifices of the ureters, postoperative stone formation in the bladder, urinary incontinence, recurrent prostate adenoma, non-healing suprapubic bladder fistula, sexual dysfunction, retrograde [1-5] fistula.

Stricture of the urethra and stenosis of the bladder neck, the frequency of which is 0.4-7.1% in the first 3 months after surgery [6-7]. These complications occur regardless of the method of adenomectomy. The stricture of the urethra can have various lengths and be localized in any part of it [15, 18]. The most commonly observed stricture of the prostatic urethra. It develops against the background of previous adenomectomy inflammatory processes of chronic prostatitis, adenomitis, cervical cystitis, vesiculitis, creating favorable conditions for inflammation of the bed of the adenoma and trauma to the prostate urethra during enucleation of the adenoma.

In a number of cases, stricture is asymptomatic for a long time after adenomectomy and is clinically manifested by an increase in obstructive symptoms or with the addition of a secondary infection and stone formation (difficulty urinating in a thin stream, excretion of urine in drops). Diagnosis is based

on the patient's complaints, the results of urodynamic studies, bougienage of the urethra. To establish the localization and configuration of the stricture, urethrography is the most effective method, especially in combination with ascending urethrocystography (gold standard) vocal cystourethrography performed in anteroposterior and oblique projections. On urethrograms with strictures of the prostate part of the urethra, its lumen is sharply narrowed at the exit from the bladder, the contrasting substance enters the bladder in a thin stream (the phenomenon of "toothpaste").

Stricture of the ureteral orifices is a rare complication associated with their damage during transurethral resection or "open" adenomectomy, when a sufficiently clear identification of the ureteral orifices is not carried out and they are captured by sutures when the edges of the prostate capsule wound are sutured. Subtrigonal electrocautery manipulation and bleeding during transurethral resection followed by tissue scarring can lead to stenosis of the ureteral orifices. Obstruction at the level of the terminal sections of the ureters usually develops imperceptibly and is manifested by symptoms of hydronephrosis, the addition of an acute infection of the upper urinary tract, renal failure.

At the site of the removed adenoma, with technical errors in the imposition of hemostatic sutures on the bladder neck, creating conditions for its deformation, a residual cavity, or the so-called pre-bladder, an artificial barrier between the bed of the adenoma and the bladder, may remain. The pre-bladder is often combined with cervical stenosis and stricture of the prostatic urethra [19, 20, 21]. Clinically, this is characterized by difficulty urinating with straining, urine drop-by-drop, pain in the perineum and along the urethra, prolonged urine leakage after urination. The most effective method of treating such complications is internal urethrotomy with an electric knife using an operating urethrocystoscope and transurethral resection of the bladder neck with drainage with an indwelling catheter in the postoperative period for 3 to 5 days and subsequent bougienage for 2 to 3 months with a decreasing frequency.

Urinary incontinence after adenomectomy in most cases is associated with trauma to the distal preprostatic sphincter and damage to the external voluntary striated sphincter.

The cause of postoperative urinary incontinence may be trauma to the internal sphincter with the merciless nature of the operation with the development of stricture.

Elucidation of the causes of urinary incontinence after adenomectomy determines the choice of treatment. For functional urinary incontinence (detrusor instability), treatment with anticholinergic drugs is performed. Treatment of urinary incontinence of organic origin is carried out differentially, depending on the severity of the pathology. In case of partial incontinence, conservative treatment is indicated: bougienage, the appointment of drugs that tone the muscular apparatus of the urethra (duplex, aloe, adenosine triphosphate, vitamins, FiBS), electrical stimulation of the pudendal nerve. With complete urinary incontinence, they resort to surgical correction (reconstructive surgery in the cervico-urethral segment).

Urolithiasis of the lower urinary tract also belongs to the complications of adenomectomy, the frequency of which is 4.5 -5.6%. The stones are localized in the cavity of the bladder, its diverticula, the bed of the adenoma, "dumbbell-like" stones can be traced, spreading from the bed of the adenoma into the cavity of the bladder. In the early stages of stone formation, the wall of the adenoma bed is inlaid. The most common symptoms are a burning sensation in the perineum or rectum, pain in the penis and anus. Less common are hematuria, urinary incontinence or the release of urine in drops after the end of the act of urination, an intermittent stream of urine. With digital rectal examination, dense masses are determined with localization of stones in the adenoma bed, which can be mistaken for prostate cancer. Endoscopic studies are not always informative in the localization of stones in the bed of the adenoma, which become invisible due to the growth of the urothelium, which covers most of their surface. Echography is of great importance in diagnostics.

After adenomectomy, a relapse of prostate adenoma may develop. Adenoma of the prostate gland consists of many nodules, which are often deeply embedded in the thickness of the surgical capsule and, therefore, cannot be removed. Subsequently, they become a source of repeated growth of prostate adenoma. Recurrence of prostate adenoma is a slow process, which manifests itself 5-6 years after adenomectomy and occurs in 1-2% of patients. Recurrence of adenoma of the prostate should be differentiated from residual adenomatous tissue, the growth of which appears relatively early, that is, after 6-12 months. after surgery, mainly after transurethral resection.

Re-treatment of prostatic hyperplasia after removal of the prostate adenoma usually involves surgical procedures.

The main reason for a long-term non-healing suprapubic urinary fistula after a cystic suprapubic adenomectomy is insufficiently well-established drainage of the urinary bladder (with a blind suture of the anterior wall), poor functioning of the indwelling catheter.

Transurethral resection of the prostate, in comparison with transvesical adenomectomy and especially with radical prostatectomy, is accompanied by significantly less trauma to the prostate, seminal vesicles, seminal tubercle, urethra, but often leads to aggravation of copulatory dysfunction, which took place before surgery due to age-related changes in the patient's body (Geppi– Attee S. et al., 2000). Madorsky initials et al. (1997) for the first time put forward a hypothesis about the role of thermal damage to the structures of the cavernous nerves during TURP of the prostate in the projection of 5 and 7 o'clock of the conventional dial.

Damage to the nerve fibers of the pelvic plexus is the main cause of erectile dysfunction after surgery on the pelvic organs. Therefore, the pelvic plexus and its efferent fibers innervating the cavernous bodies (cavernous nerves) have recently become the subject of comprehensive research.

The most common complication of the late postoperative period after transurethral resection of the prostate in patients with benign prostatic hyperplasia is the persistence of irritative symptoms, the main causes of which are systemic microcirculation disorders and exacerbation of the inflammatory process in the prostate gland in the postoperative period [8,11].

Independent researchers in 2012 led by Carnevale F.C. published the results of treatment of more than 100 BPH patients with LUTS and a gland volume from 30 to 90 cm³. The effectiveness of the procedure was assessed as extremely high. Until now, new research results from all over the world appear every year, indicating the high potential of the method of prostatic artery embolization (EPA).

The passage of important branches of the pelvic plexus between the rectum and the urethra was revealed: they penetrate through the urogenital diaphragm near the urethra or through its muscular wall. After operations on the prostate gland (radical retropubic prostatectomy, transvesical adenomectomy, transurethral resection of the prostate), erectile dysfunction can occur as a result of damage to these branches at two points: when the lateral leg is separated or during apical dissection with mechanical and thermal effects on the urethral wall. A common cause of the development of erectile failure after transurethral interventions is also damage to the cavernous nerves and vessels of the penis located in the paraprostatic zone during perforation of the surgical capsule of the prostate [13].

Long-term long-term complications after such modern minimally invasive interventions as ablation, vaporization, HoLEP and others await consideration, comprehension and development of medical care tactics. [9,10,12,14,16,17].

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