

As announced in the Editorial by Bruce Farnsworth (*Pelvip erineology* 2011; 30:5) this is the ninth and last of a series of articles highlighting the different sections of the book “*Pelvic Floor Disorders, Imaging and a Multidisciplinary Approach to Management*” edited by G.A. Santoro, P. Wiczorek, C. Bartram, Springer Ed., 2010.

## Failure or recurrence after surgical treatments

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The last section of the book “Pelvic floor disorders - Imaging and Multidisciplinary Approach to Management” is focused on “Failure or Recurrence After Surgical Treatments”.

In the “Introduction” T. Rechberger and A.P. Wiczorek present epidemiological studies, reporting that the percentage of failures after primary classical repair of pelvic organ prolapse (POP) markedly exceeds 30%. Moreover, even new methods of reconstructive surgery, such as synthetic grafts used vaginally, are not free of the complications although provide higher cure rates than traditional vaginal repairs. Commonly known risk factors responsible for surgical failure after primary repair of POP include: improper patient selection, incorrect surgical technique and inappropriate selection of surgical materials, accompanied by lack of experience in pelvic reconstructive surgery, persistence after surgery of risk factors for POP occurrence (obesity, constipation, chronic cough), congenital defects in extracellular matrix components that influence the function of fascias and ligaments, diminished levator ani contraction strength and a widened genital hiatus >5 cm. Selection of suitable patients is definitely the best way to avoid unnecessary complications. Vaginal meshes should not be used in all patients who present with prolapse. In older women with bad general health conditions, some traditional techniques such as colpocleisis are still valuable. Thus, meshes should be used selectively in patients who will benefit from their use and where the benefits outweigh the potential risks. The authors describe some of the most common complications such as: micturition, dyspareunia, leakage. Moreover, surgical tips to minimize the probability of tape or mesh exposure are reported. In summary, proper patient selection, local estrogen treatment before operation in patients with severe urogenital atrophy, appropriate surgical technique, antiseptic rules and antibiotic prophylaxis, more frequent use of imaging modalities, are the keys to success.

The “first chapter” of this section describes in details the “*Imaging and Management of Complications of Urogynecologic Surgery*”. The author presents results of his study on a large prospective series on the incidence of urinary tract injury, utilizing universal cystoscopy. It was found that total urinary tract injury rate was 4.8%. Injuries occurred in 7.6% of total vaginal hysterectomies, 4.0% of total abdominal hysterectomies, and 2.0% of laparoscopic hysterectomies (P = 0.156). Concurrent prolapse surgery was associated with an increased risk of urinary tract injury (14.6% vs. 4.0%; P = 0.01). Not all urinary tract injuries were detected intraoperatively. Procedures such as Burch and Marshall-Marchetti-Krantz urethropexy carry the inherent risk of ureteral, bladder, and urethral injuries. The bladder injuries identified at the time of surgery need to be man-

aged by primary closure. The author suggests a suprameatal urethrolysis approach, as this technique has resulted in 90% resolution of the voiding dysfunction and no occult urinary incontinence. Less common risks of retropubic procedures are represented by pain, osteitis pubis, and osteomyelitis, and apical vaginal support failure (pudendal neuropathy, apical prolapse after vaginally implanted graft material, extrusion of abdominally implanted polypropylene mesh, extrusion of vaginally implanted graft material, and vaginal stenosis). Another complications after POP surgery is recurrence of the prolapse and bladder erosions with a creation of a vesicovaginal fistula. When these complications occur, they result in tremendous suffering on the patient’s part, with necessity of removing the mesh. Bladder erosions require removal by laparotomy and cystotomy, or a combined cystoscopic/laparoscopic approach. Perineorrhaphy repair may result in stenosis of vaginal introitus. Repair requires reapproximation of the superficial transverse perinei, bulbospongiosus, puboperinealis, puboanalis, and rectovaginal septum for the best functional results.

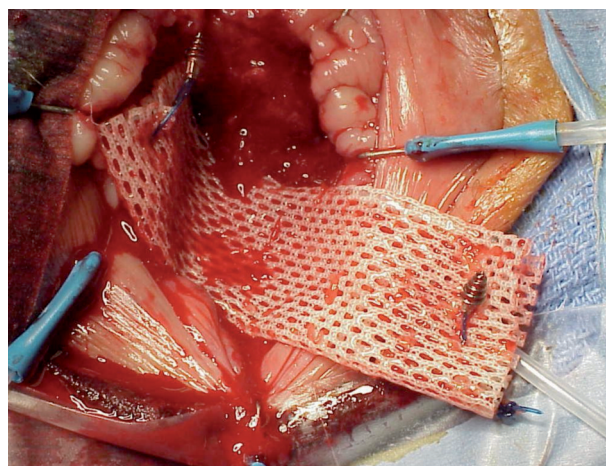


Figure – The silicone sling with the bone anchors attached as it is being removed through the vaginal extrusion site.

In the “invited commentary”, W. Davila has emphasized the expanding role of imaging in identifying mesh contraction and its promising data in identifying those patients who require removal of a segment of the graft and those requiring removal of the entire graft for relief of pain symptoms. Since mesh contraction may be due to over-tensioning of the mesh during implantation, it is likely that imaging techniques could be valuable in guiding surgeons to achieve appropriate tensioning of mesh, avoiding over-

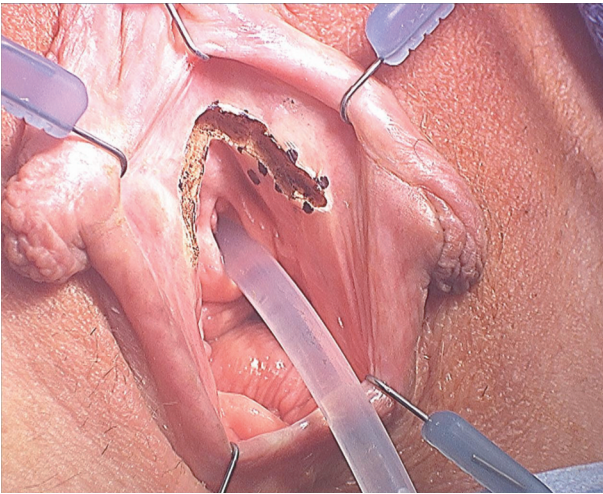


Figure – Suprameatal urethrolysis.

sioning. Imaging techniques will have greater applications in the evaluation of pelvic anatomy and identification of mesh complications related to pelvic surgery, and in the prevention of complications relative to mesh use.

In “*the second chapter*” entitled “*Investigation and Management of Complications after Coloproctological Surgery*” T.W. Eglinton and F.A. Frizelle review the incidence and management of complications after colorectal surgery. The authors describe specific infection-related complications such as wound infection, intra-abdominal abscess, and anastomotic leak, which is the most significant and feared, with the potential for considerable morbidity and mortality. The management of anastomotic leak varies and may range from a conservative approach with antibiotics to laparotomy, drainage, and takedown of the anastomosis with stoma formation. Iatrogenic ureteral injuries occur in 0.3–1% of primary colorectal pelvic surgery, and may be up to ten times higher in recurrent pelvic surgery. Stoma retraction is due either to a poorly placed stoma or to tension. This complication is usually avoidable with careful surgical technique and preoperative planning. Fecal incontinence after sphincter-saving surgery for rectal cancer is relatively common and troublesome, but its occurrence can be decreased with careful patient selection, appropriate use of adjuvant therapy, and operative approaches. Incontinence rate is ranging from 1% to 63%.

In the “*invited commentary*”, F. La Torre outlines that complications following colorectal and proctological surgery are various and related to the indication, to the choice of treatment, and to the general clinical condition. In all cases of anastomotic strictures that are no longer than 5–7 cm, and without local malignancy, the first choice must be endoscopic dilatation. The creation of a perfect stoma is

fundamental to avoid stoma complications. It should be started with a correct and long vascular preparation, with a stump that is more than adequate, following by a regular closure and fixation of the intestine to the abdominal wall. Thus, the majority of ischemia and necrosis responsible for retraction and early re-operation, as well as hernia and prolapse could be avoided.

In their “*invited commentary*”, I. Sudol-Szopinska and M. Kolodziejczyk have shared their experience on complications after coloproctological surgeries. Anal sphincters may be damaged during a careless hemorrhoidectomy, through cutting of the internal anal sphincter during a fissurectomy, and while operating on an anal fistula. The result of sphincter damage is incontinence. EAUS is the method of choice for classifying incontinent patients into those with normal anal sphincters or damaged ones. EAUS is used to evaluate the extent of the sphincter damage, which is necessary for planning surgery. After a successful operation of a fistula, scarring of the external anal sphincter and the puborectalis muscle are commonly observed, as it is a defect in the continuity of the internal anal sphincter, associated with its partial resection in the course of removing the fistula. The authors report that the most common reason for the early recurrence of an abscess is too small incision and inadequate drainage. The most frequent cause of fistula recurrence are errors in operative technique, such as not identifying the internal opening, leaving part of the main track and its branches, too tight suturing of the wound, inadequate drainage, or formation of a new inflammatory channel. The majority of recurrences occur within 1 year of the operation, and according to various authors this pertains to 0–26% of cases. EAUS is the first choice imaging modality for diagnosing complications after operations of anal fistulae and abscesses. Another complication is the stenosis of the anal canal. Most often it occurs after hemorrhoidectomy, fissurectomy, or after low anterior resection of the rectum. Some errors in the surgical technique, such as not preserving some healthy anoderm bridges in the anal canal, or too tight suturing of the wound, could be causative factors. Another complication is anal canal deformation, which might occur after an open internal sphincterotomy and requires surgical treatment. It has cosmetic and functional consequences. A significant deformity, such as a key-hole deformation, makes cleaning of the area difficult; patients report fecal soiling and pruritus or burning of the perianal skin.

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