SACROSPINOUS LIGAMENT FIXATION FOR VAGINAL VAULT PROLAPSE


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Abstract

The sacrospinous ligament fixation is one of the most studied and performed method for vaginal vault prolapse. The procedure requires the suspension of the vaginal vault at the sacrospinous ligament. Transvaginal sacrospinous ligament fixation is a technique for apical support that not implies the use of prosthetic materials. We report a case of a 64 years old female patient with a history of vaginal hysterectomy for uterine prolapse, where a sacrospinous ligament fixation was performed. The surgical procedure was successful without complication.

In conclusion, sacrospinous ligament fixation is an effective and safe treatment for post hysterectomy vaginal vault prolapse.

Rezumat: Fixarea ligamentelor sacrospinoase în proapsul de boltă vaginală

Fixarea ligamentelor sacrospinoase este una dintre metodele cele mai studiate şi mai performante pentru proapsul boltii vaginale. Procedura necesită suspendarea bolţii vaginale la ligamentele sacrospinoase. Fixarea ligamentelor sacrospinoase pe cale vaginală este o tehnică de susţinere apicală care nu implică utilizarea de materiale protetice. Raportăm un caz al unei pacienti de 64 de ani cu antecedente de histerectomie vaginală pentru proapsul uterin, unde s-a efectuat o fixare la ligamentele sacrospinoase. Procedura chirurgicală a avut succes fără complicaţii.

În concluzie, fixarea ligamentelor sacrospinoase este un tratament eficient şi sigur pentru proapsul boltii vaginale post histerectomie.

Cuvinte cheie: proapsul de boltă vaginală, fixarea la ligamentele sacrospinoase, histerectomie.

Introduction

Vaginal vault prolapse is a common complication following vaginal hysterectomy with negative impact on women’s quality of life. The condition occurs in equal numbers after abdominal and vaginal hysterectomy. Vaginal vault prolapsed is defined as descent of vagina apex or vaginal cuff scar below a point that is 2 cm less than total vaginal length above the plane of hymen.[1] Vaginal vault prolapse following hysterectomy is due to pre-existing weakness of pelvic floor tissue and inadequate suspension of vaginal apex after extirpation of uterus.

The primary aims of surgical treatment are the restoration of normal vaginal anatomy, improvement in vaginal bulge symptoms and the restoration/maintenance of normal bladder, bowel and sexual function.

Different procedures have been described for treatment as well as for prevention of vault prolapse...
prolapse. The two most accepted surgical techniques are laparoscopic sacrocolpopexy and sacrospinous fixation[2].

Sacrospinous fixation is one of the most common and effective surgical procedures for the treatment of vaginal vault prolapse. The procedure consists in the suspension of the vaginal vault at the sacrospinous ligament, which extends from the ischial spine, to the coccyx and the lower portion of the sacrum. It was first described in 1968[3] and, initially, it was performed unilaterally on the sacrospinous ligament, following dissection of the pararectal space. Over time, in order to reduce dyspareunia and bowel symptoms, the bilateral technique was gradually introduced to treat prolapse of the uterus, vaginal apex, and recurrent vaginal vault prolapse [4]. The type of vaginal vault prolapse repair, was first described by Amreich[5] and later modified by Richter[6].

Fixation of the vaginal apex to the sacrospinous ligament has many advantages. By using a transvaginal approach, the incumbent potential complications of laparotomy are avoided as well as recovery to normal activity is shortened as well as maintenance of sexual potency.

Case report

We present the case of a 64 years old patient with a history of vaginal hysterectomy for uterine prolapse performs 3 years before. Patient was referred for recurrent vaginal vault prolapse, with the vaginal cuff descending at the level of the hymenal ring.(Figure1A). Clinical exam revealed the anatomical defect. Patient reported urgency, frequency, nocturia and moderate pelvic pain. No stress urinary incontinence was associated. The patient was counseled about treatment options and vaginal sacrospinous fixation of the vaginal apex was decided.

A 4 cm posterior midline vaginal incision was made starting from the vaginal apex. Blunt dissection of both pararectal spaces was performed. The sciatic spines were identified and then the sacrospinous ligament was dissected and prepared for placement of the threads. Using a Sacrofix device (Figure1D), two nonabsorbable sutures are placed through the sacrospinous ligament bilaterally. The threads are placed 2 cm medial from the ischial spine in order to prevent the damage of the pudendal pedicle. Two flaps of the remaining vaginal mucosa are dissected and fixed bilaterally to the sacrospinous ligaments using the threads that were previously placed in the ligaments. The vaginal flaps were de-epithelised using the monopolar cautery in order to prevent inclusion cyst formation. A posterior colporraphy was performed as a final step of the procedure.

Discussion

Vaginal vault prolapse can be corrected by many different surgical procedures.[13,14] Vaginal vault prolapse often is a consequence of prior hysterectomy, either as a consequence or as an expectable result of a coexisting pelvic floor defect at the time of primary surgery.[2]

Numerous surgical techniques have been described to suspend the vaginal vault, including either a vaginal or a abdominal approach and more recently, a laparoscopic approach.[8]

The possible intraoperative complications are represented by severe bleeding caused by damage of internal pudendal artery.

Temporary sciatic neuralgia, buttock pain and ischiorectal haematoma are the most frequent short term complications associated with this procedure.

The most common long term complication after this procedure is the de novo cystocele, [7], resulting from the redistribution of abdominal pressure towards the anterior vaginal wall.

This procedure has advantages, including success rates comparable to abdominal procedures, the ability to repair concomitant pelvic floor defects, the absence of laparotomy, shorter hospital stays, and the preservation of vaginal length and function.

The decision regarding the procedure type must be individualised for every patient. The patient’s age, medical history, sexual activity, specific anatomic features, prior and concomitant pelvic surgical procedures, and personal wishes should be taken into consideration when planning the procedure. The sacrospinous vaginal vault suspension has been studied extensively and is a reliable and safe
procedure for the repair of post-hysterectomy vault prolapse. [9]

Recurrent vaginal vault prolapse after sacrospinous ligament suspension has been reported. Factors responsible for the recurrence after sacrospinous ligament fixation are attenuation and subsequent weakening of the supporting ligament due to aging and menopause, inherent weakness of the supporting tissue, avulsion of sutures from the supported vagina tissue and inadequate repair. [10]

Transvaginal sacrospinous ligament fixation is a technique for apical support that not implies the use of prosthetic materials. This represents a major advantage since the use of polypropylene mesh inserted vaginally is only recommended for the treatment of anterior compartment defects. Adequate preparation of the pararectal space, direct visualization of the sacrospinous ligament and proper suture positioning are the key points in minimizing the risk of complications.

The use of polypropylene mesh combined with fixation to the sacrospinous ligaments transvaginally is best known surgical approach for pelvic floor defect until now. [11,12]

References


Figure 1: A: vaginal vault prolapse, B: remaining vaginal mucosa, C: passing through the flaps of remaining vaginal mucosa, D: Sacrofix device, E: Final aspect after posterior colporrhaphy.
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