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How I Do It? Surgical Management of Rectocele: A Transperineal Approach

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Abstract

A rectocele is a hernia of the anterior rectal wall through the rectovaginal septum. It is a common finding in patients with obstructive defecation syndrome. We present a perineal approach to the surgical management of a rectocele and emphasize the advantages over other approaches in being safe, easy and efficacious in repairing the full length of the weakened rectovaginal septum, strengthening the pelvic floor through an anterior levatorplasty and carrying out sphincter repair if concomitant anal sphincter injury.

Keywords: Rectocele; Transperineal; Rectovaginal septum; Anterior levatorplasty

Introduction

A rectocele arises from muscular and nerve damage sustained during vaginal delivery, as a result of hormonal changes following the menopause or due to paradoxical contraction of puborectalis. Weakness of the pelvic diaphragm (levator ani) and disequilibrium between the pelvic compartments results in descent of the middle compartment, which may present as an enterocele, a high rectocele or vagina prolapse [1]. Rectoceles occur due to pressure gradient between the rectum and vagina during coughing and straining due to weakness in the puborectalis and bulbocavernosus muscles [1]. It is important to note that the vagina is both a perineal (1/3) and pelvic organ (2/3) i.e. extends above the anorectal ring, and thus, with respect to the position of the rectovaginal septum a rectocele can be high or low (Figure 1). The rectum and the vagina have a common embryological origin with close anatomic affinity. They originate from the cloaca that is divided by the urorectal septum at 6 to 8 weeks of gestation into a ventral (urogenital) and a dorsal (rectal) portion. The rectovaginal septum (fascia) is a layer of strong connective type tissue identified between the rectum and vagina. This layer, located immediately beneath the vaginal mucosa could be considered part of the vaginal wall and acts as a supportive structure for the posterior lying perineal body that prevents the rectum from bulging into the vagina [2]. Anterior rectocele is a common finding in patients with obstructive defecation syndrome, but may also occur in asymptomatic patients. Symptoms include difficulty in evacuation, constipation, the need for perineal or vaginal digitations during defecation and rectal discomfort. Digital rectal examination will evaluate the height, size (both in the extent of protrusion into the vagina as well as the length of involvement of the rectovaginal septum, although size does not necessarily correlate with severity of symptoms and rule out abnormal puborectalis function during the straining effort. Rectosigmoidoscopy will exclude recto-rectal intussusception and the presence of a rectal mass that may mimic these symptoms [1]. Rectocele is a common finding on defecography and magnetic resonance proctography [3,4]. Surgical repair by either gynecologists or colorectal surgeons gives highly variable results and can be performed *via* transvaginal, perineal, transanal or transabdominal routes. A variety of techniques employ suture plication, mesh reinforcement of the rectovaginal septum, resection of redundant tissue, fixation of the rectum, vagina or perineal body, or reinforcement of the pelvic floor musculature [1,5]. The excision of rectoceles using linear and circular staplers (stapled transanal rectal resection-STARR) has been a recent voque [1,6]. In the transperineal repair, the rectocele is reached through the perineum. Transperineal repairs either as an isolated facial repair or in combination with mesh augmentation, are hypothesized to reduce the risk of complications compared with alternative techniques [1,7]. The advantage of combining the repair of rectocele and anterior levatorplasty by the transperineal approach may be a useful procedure for correcting rectocele with associated faecal incontinence such as soiling [8]. The procedure is also easy and safe [5,7-9].

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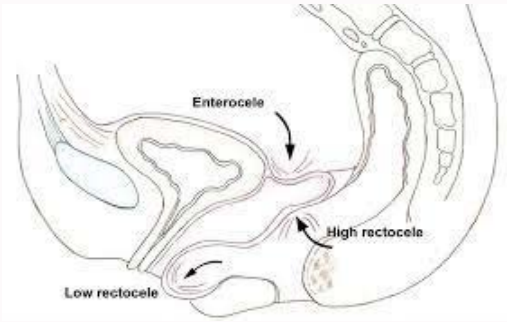

Figure 1: Schematic diagram of rectocele and enterocele.

Figure 2: Schematic diagram demonstrating the separation of the rectocele from the posterior vaginal wall and creating access by blunt dissection cephalad to the levator ani muscle.

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Preoperative mechanical bowel preparation and prophylactic antibiotics are given. The patient undergoes a spinal or general anesthesia and placed in the lithotomy position with the buttocks placed right at the edge of the operating table and laid apart. A curvilinear incision in the anterior perineum just above the pigmented area will delineate the upper margin of the external anal sphincter and allow the dissection of the rectovaginal space just above. Using electrocautery and blunt dissection and retracting the external anal sphincter muscles inferiorly and the vagina superiorly the rectovaginal space is entered. Digital palpation of both the vagina and adherent rectum would greatly help delineate the appropriate plane posterior to any large paravaginal veins for entry into the rectovaginal space. This would avoid perforation of the rectum or vagina which would be primarily closed with full thickness 3.0 polyglactin sutures if it occurred. The dissection proceeds in the cephalad direction to expose the entire length of the rectovaginal septum defect i.e. a high dissection to the level of the vaginal copula (Figure 2). Hemostasis of the posterior vaginal veins is performed. The rectovaginal fascia overlying the rectal wall is plicated transversely with 2.0 absorbable polyglactin sutures from cephalad to caudal (Figure 3). Next, the anterior limbs of the levator ani muscle are sutured to the midline using two or three interrupted 2.0 polyglactin sutures (i.e. anterior levatorplasty). This important step reconstructs the perineal body, gives further support to the pelvic floor and thus prevents recurrence of the rectocele (Figure 4). If required concomitant sphincter repair can be accomplished as well as other procedures for managing associated hemorrhoids, rectovaginal fistula or fissures (Figure 4)

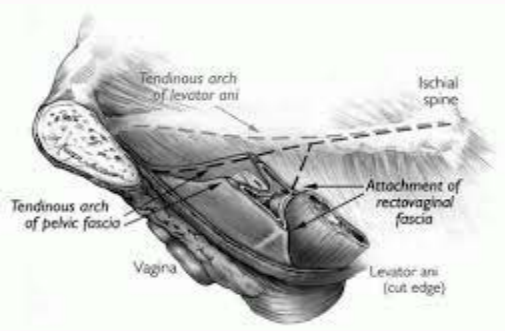

Figure 3: Schematic diagram of the disposition of recto vaginal fascia in relation to the rectum and levator ani muscle.

Figure 4: Schematic diagram showing anterior levatorplasty and sphincteroplasty if required.

Figure 5: Healing perineal wound of a 25 years old multiparous African woman 2 days post perineal approach to a rectocele repair by authors.

[10]. Thorough hemostasis is undertaken prior to closing the skin, and no drain is left in place (Figure 5). Perineal drains are known entry sites for wound infection [11]. Postoperatively, sitz baths are instituted and the patient is given a low residue diet for the first 48 h. Complications associated with transperineal approach include rectovaginal fistula, dyspareunia and anterior mucosal prolapse which can be successfully treated by rubber banding [1,7,8].

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