

Posterior Sagittal Anorectoplasty in Treatment of Recto-Vestibular Fistula in Adult Patients

Paulino Martínez Hernández-Magro^{1*}, Néstor Martínez Salcedo² and Néstor Martínez Hernández-Magro²

¹Colon and Rectal Surgery Department, Médica Avanzada de Celaya (MAC), Celaya Guanajuato, México

²Pediatric Surgery Department, Médica Avanzada de Celaya (MAC), Celaya Guanajuato, México

Abstract

Anorectal malformations occur in 1 in 5,000 births. Some patients persist until adulthood with the problem; however, due its infrequent presentation in adult patients, colorectal surgeons in general are not familiar with this condition, therefore these patients are commonly advised to have a permanent stoma. The posterior sagittal anorectoplasty (PSAR) has become a proven and standard technique for operative correction of anorectal malformations in childhood and many pelvic conditions and must be part of the colorectal surgeon armamentarium as it is also an effective technique in adults.

Keywords: Anorectal malformation; Recto-Vestibular fistula; Adult patients; Posterior sagittal anorectoplasty

Introduction

Anorectal malformations include a wide spectrum of conditions, usually referred to as imperforate anus or ectopic anus, and now classified according to the anatomic type of the congenital defect. Occurring in approximately 1 in 5,000 births [1], most of these anorectal malformations are corrected during infancy, however some patients (generally women with recto-vestibular fistula, or underwent to a “cut back” procedure [2]), persist with the problem until adulthood and seek evaluation from an adult colorectal surgeon, same as patients who were born with anorectal malformations treated in the childhood and have functional problems or sequelae after surgical repair.

The posterior sagittal anorectoplasty (PSAR) is an already proven technique that has become a standard technique for operative correction of anorectal malformations since 1982 when this approach was described [3], mostly used in infants. Adult patients with anorectal malformations are usually condemned to have a permanent stoma, however the PSAR is not only a useful approach to treat anorectal malformations, it also represents an alternative to treat many pelvic conditions like recto-vaginal fistula, recto-urinary fistulas [4], retrorectal tumors, low benign strictures, postradiation fistulas, etc [5-13], and therefore adult colorectal surgeon should be familiar with this approach.

In our service, we have done this procedure in four patients, all women with recto vestibular fistula with good perception of the patients about the procedure, the urinary infections were resolved and patients were shown satisfied of having a “normal position” anus. None of the patients develops anal stenosis and only one refers some degree of incontinence rated with 9 points in the Wexner score and she is receiving biofeedback therapy.

Is important to remember that in these malformation the rectum opens in the vestibule of the genitalia, so the usual methods to evaluate pre-operatively the sphincter complex (endorectal ultrasound, manometry) are not conclusive and do not change the surgical decision due this is a congenital malformation that require correction, and maybe are more important at the post-operatively time to have a better prognosis of the continence. MRI could be the most important pre-operatively way to evaluate the anatomy of the pelvic floor and sacrum. Most of the information is giving during patient's evaluation if they have a good sacrum and well-developed sphincteric mechanism.

Technique

We perform a complete bowel pre-operative preparation with sodium phosphate solution (Fleet PS Fosfosoda®) and intra-luminal prophylactic antibiotic, rifaximin (Flonorm® Schering-Plough Mexico). Due to the anatomy of the defects in adult patients, generally is not necessary to realize a protective stoma prior to the reconstruction. The patient is placed in prone position, the buttocks are holding by an adhesive tape in both sides of the surgical table, and a urethral tube is inserted to evacuate the bladder and avoid the contact between urine and surgical wound at the postoperative time (Figure 1). Electrical stimulation is necessary to find the contraction of the sphincteric complex muscle posterior to the fistula site, and to identify the center of the muscular complex.

After preparation and draping of the surgical area a midline incision is made beginning a few centimeters below the coccyx and it is extended to the intestinal fistula, the incision is continued through the subcutaneous tissue, parasagittal fibers and muscle complex, leaving an

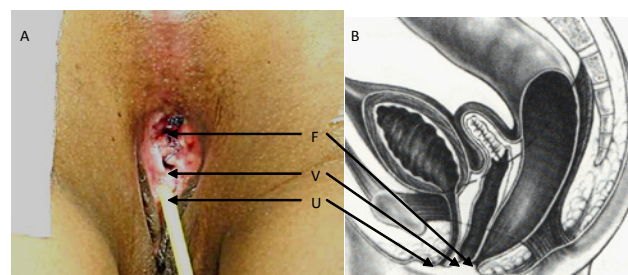


Figure 1: A) Fistula recto-vestibular (F- fistula, V-vagina, U-urethra). B) Diagram of the defect. (Reprinted with permission from Peña A, (1998) Pediatric Surgical Problems, Chapter 18, In: Colon and Rectal Surgery, 4th edition, Marvin L. Corman, Lippincott-Raven, Philadelphia, USA. pp 449-488).

***Corresponding author:** Dr. Paulino Martínez Hernández-Magro, Azucenas No.137, Col Rosalinda I CP, 38060 Celaya Guanajuato, México. Tel: + 52 (461) 6162123; E-mail: paulinomhm@hotmail.com

Received March 27, 2012; **Accepted** April 06, 2012; **Published** April 17, 2012

Citation: Hernández-Magro PM, Salcedo NM, Hernández-Magro NM (2012) Posterior Sagittal Anorectoplasty in Treatment of Recto-Vestibular Fistula in Adult Patients. J Clin Case Reports 2:128. doi:10.4172/2165-7920.1000128

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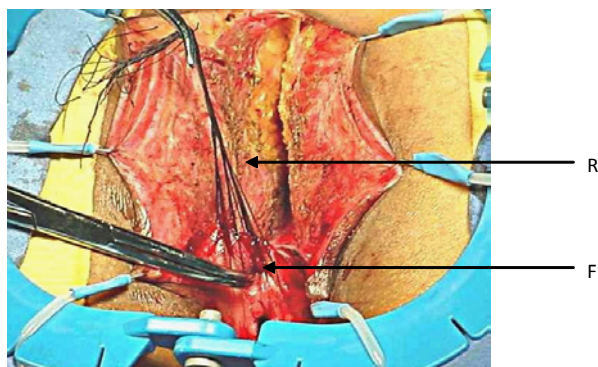


Figure 2: Midline incision with equal quantity of muscles on both sides, the rectum (R) and the fistula (F) can be identified.

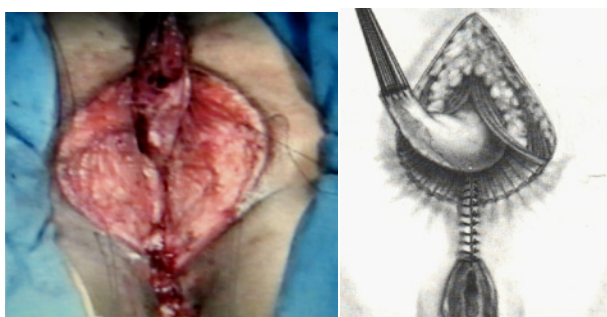


Figure 3: Complete rectal mobilization and re-location within the muscular complex. (Diagram reprinted with permission from Peña A).

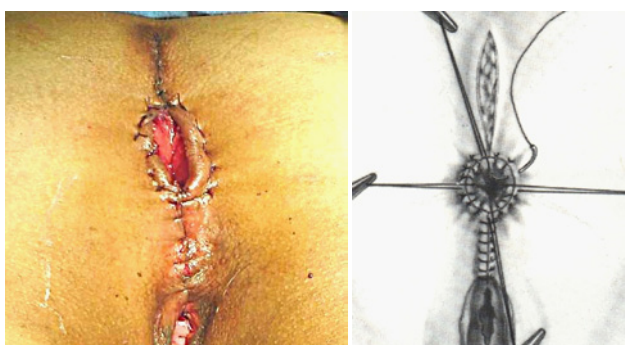


Figure 4: Final reconstruction of the perineal body and anoplasty. (Diagram reprinted with permission from Peña A).



Figure 5: Complete healing at six weeks of the surgery.

equal quantity of muscles on both sides. (Figure 2) The dissection is easier when is performed with a very fine needle tip cautery. When the posterior rectal wall is identified (a nacreous structure) the dissection must be lateral until the rectum is well identified. A multiple 3-0 silk sutures are place surrounding the fistula to exert traction, and the common wall that share the rectum and vagina start to be separated until we obtain full separation of the rectum from vagina (Figure 3). Mobilization of the rectum must be adequate to allow relocation within the muscle complex without tension. Exposition of the surgical place is more easily using a Lone Star retractor®. Once the dissection has been completed the anterior perineum is reconstructed, and then an ano-plasty is created within the limits of the sphincteric complex previously demarked and identified by electrical stimulation (Figure 4). The posterior edge of the muscle complex is reapproximated, bringing together the posterior limit of the external sphincter and anchoring muscle to the rectum to create the ano-rectal angle, and prevent prolapse.

At the second week after operation, the patient receive a progressive dilatation schedule until achieving a passage of a size 16-18 Hegar's dilator to avoid anal stenosis, and receives instructions for strengthening of the perineal muscles and sphincter complex (Figure 5).

Conclusion

The PSAR is a feasible technique to resolve anorectal malformations in adult patients and a multiple anorectal and pelvic conditions. The Colorectal Surgeon must be familiar with this approach, and make it as a part of his armament.

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