

Anorectal Anomalies in Adult Females Corrected by Posterior Sagittal Anorectoplasty

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Summary

Posterior sagittal anorectoplasty (PSARP) is preferred by most pediatric surgeons to correct high and intermediate types of anorectal anomalies (ARA) in infants. In this report, we describe two girls who presented in their late teens with ARA and were treated by PSARP. Prior to this report, only two adult females with congenital rectovaginal fistulae treated by PSARP have been reported. Megarectum is a feature in late presentation of ARA and requires rectal tapering during PSARP. The functional outcome in late presentation of ARA is discussed.

Key Words: Anorectal anomaly, Posterior sagittal anorectoplasty

Introduction

Anorectal anomalies (ARA) are grouped by Wingspread classification into high, intermediate and low types depending on whether the distal end of the rectum ends above or is surrounded by or reaches below the level of the levator muscular sling respectively¹. In females with high and intermediate anomalies, the distal end of the rectum often opens into the vagina or into the vestibule. Two female patients in their late teens who presented with intermediate types of ARA managed by posterior sagittal anorectoplasty (PSARP) are described in this report. Prior to this, only two adult females with congenital rectovaginal fistulae treated by PSARP have been reported^{2,3}.

The sphincter muscles of the anorectum are arranged as a continuous sphincter muscle complex (SMC), starting with the sling-like arrangement of the puborectalis above to the external sphincter below¹. The principles of PSARP are based on this anatomical arrangement¹.

Patient 1

A nineteen- year- old lady presented with features of sub-acute intestinal obstruction and menorrhagia. She had been passing stool from the introitus since birth and had constipation and 'faecal incontinence'. Clinical examination revealed a distended abdomen with a large faecaloma. The anus was absent at the normal site and the faeces was passing out from the vagina. The vagina was pushed anteriorly and compressed by the faecal loaded rectum. At laparotomy, the massively distended lower descending colon and the sigmoid were resected and the distal bowel was brought out as a mucous fistula. End-colostomy was fashioned in mid-descending colon.

After six months, to allow for reduction in the diameter of the rectum, PSARP was performed as per the surgical principles described¹. SMC was identified by electrical stimulation and the muscle fibers divided precisely in the midline by diathermy. The rectum was adequately mobilized from the vagina under vision. The rectum was tapered and placed in the center of SMC and the latter was reconstructed snugly around the rectum. The

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site of the maximum confluence of the external sphincter part of the SMC was determined with muscle stimulator and the neoanus fashioned at that site. The SMC was attached to the rectum by sutures. The neoanus accommodated 18-size Hegar dilator after reconstruction. Anal dilatations were started from the tenth postoperative day and continued for 8 weeks, following which intestinal continuity was restored by colorectal anastomosis. She was put on daily laxatives for three months due to constipation. She has been under follow-up for the past four years and currently requires laxatives twice weekly. She does not have major faecal soiling but has faecal staining about 2-3 times/week.

Patient 2

A seventeen-year-old girl presented with sub-acute intestinal obstruction. She was diagnosed to have imperforate anus at birth and since then was passing stool from the vulva. Clinical examination revealed the anorectal opening in the vestibule. MRI of the pelvis showed adequately developed SMC (Fig.1). She had a

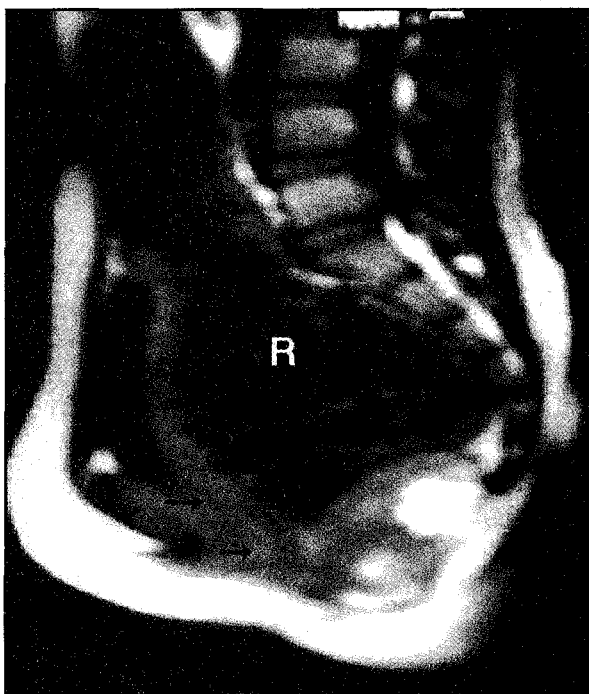


Fig. 1: MRI showing the sphincter complex (→) and the distended rectum (R).

transverse colostomy to relieve her intestinal obstruction before she was referred to us. Three months following the colostomy she underwent PSARP with rectal tapering. The colostomy was closed 8 weeks later. She had severe constipation for a period of 6 months and required laxatives and frequent enemas. She has been under follow-up for the past three years, has no faecal soiling or staining but requires laxatives every day and enemas occasionally.

Discussion

Currently most pediatric surgeons prefer PSARP for the management of high and intermediate types of ARA^{1,4}. Prior to its advent most high and intermediate ARA were managed by sacroabdominoperineal or sacroperineal pull-through (SAP-SP) operations but the latter did not allow clear visualization of the SMC. PSARP allows good access to mobilize the rectum, dissect the fistula under vision and accurately reconstruct the SMC around the rectum. Injury to the pelvic nerves, the urethra in males and vagina in females is thus reduced. Postoperative rectal prolapse is minimised by suturing the SMC snugly around the rectum and by direct sutures between the rectum and the sphincter muscles.

Radiological and functional evaluations have shown that SMC heals and functions well after reconstruction^{1,4}. Assessment of the rectal position in relation to the reconstructed SMC and the anorectal angle with MRI are useful in the postoperative evaluation of continence⁴. Girls in general, achieve better faecal continence than boys. In both of our patients constipation was the major problem due to the late age at presentation and the consequent megacolon and megarectum. However, with the proper use of laxatives and motivation, both patients have achieved good anorectal function. The atonic megarectum is also seen in infants with ARA but naturally is more prominent in cases diagnosed late. The megarectum results in ineffective peristalsis and rectal inertia (RI). RI may occur despite a patent anal canal². Tapering of the megarectum during PSARP reduces postoperative RI¹. PSARP has been shown to be superior to SAP-SP operations in terms of long-term anorectal function^{1,4}. Rectal adaptation and cortical control of defaecation are better if PSARP is done in the neonatal period¹.

CASE REPORT



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