

# LAARP (Laparoscopic Assisted Anorectal Pull Through) in Male Arm Learning & Experience at Tertiary Care Center

Dr Milind Joshi<sup>1</sup>, Dr. Shubham Mankar<sup>2</sup>, Dr. Shivaji Sadulwad<sup>3</sup>

<sup>1</sup>Professor

<sup>2</sup>Junior Resident

<sup>3</sup>HOD

**Abstract:** Anorectal malformation in new born is a challenging surgical scenario. Various treatment modalities are mentioned for different types of malformation in male or female babies. In a male child usually staged repair is advocated wherein in early neonatal period diverting colostomy is made followed by rectal pull through and then colostomy closure. We present our experience of laparoscopy assisted anorectal pull through for 2 ND stage procedure in male children with high anorectal malformation in last 3 years. **Material:** male children with high anorectal malformation. **Method:** laparoscopic pull through was done using 3 ports technic. Distal loop of stoma mobilized laparoscopic ally by diving the inferior mesenteric artery. Recto prostatic fistula is divided. Anal sphincter is marked in perineal site in mid line. Sphincter is divided and rectum is pulled down and sutured with sphincter complex. **Results:** between 2018 - 2020, 9 male children with high ARM were operated by LAARP. All had successful outcome without any complication. **Conclusion:** LAARP is excellent procedure for high ARM in male children with all advantages of minimally invasive surgery with less chances of urinary tract injuries.

**Keywords:** (LAARP) Laparoscopic Assisted Anorectal Pull Through

## 1. Introduction

- Surgical treatment of male ARM has elucidated surgeons since centuries
- Cut back anoplasty, perineal, Abdominoperineal, sacral, laparoscopic pull through are various options
- Laparoscopic - assisted anorectal pull - through (LAARP) has become important surgery in the treatment of high anorectal malformations (ARM) in boys

### Advantages of LAARP are:

- An excellent visualization of the fistula
- full mobilization with preservation of distal rectum
- Accurate placement of rectum within the levator - ani muscle
- Minimal anatomical disturbance.

## 2. Technique

**Inclusion criteria** - High ARM with recto - prostatic urethral fistulae

All patients have undergone either loop or divided sigmoid colostomy in the neonatal period.

Pre - operative workup included ultrasonography of abdomen, micturating cystourethrography, distal loop cologram, echocardiography

3 port technique - umbilical and each flank Pressure - 8mm

Complete mobilization of distal limb of stoma with damage to intrinsic blood supply Identification of fistula by observing the distal tapering of rectum into prostatic urethra

Fistula transfixated and divided

Pelvic muscle floor and levator ani seen

External muscle sphincter identification with muscle stimulator

Midline perineal dissection within sphincter and passing dilators thru' it

Pt of 10mm port via incision and pulling of distal mobilized rectum and fixation

### Surgery and Ergonomics

- Child placed cross - table with laparoscopic equipment at foot end and the surgeons at head end.
- Supraumbilical 5 mm camera port was inserted along with two 5 mm working ports over bilateral flanks depending on colostomy site, preferably in right lumbar and left hypochondrial regions.
- A transcutaneous bladder hitch stitch was taken after catheterization of the bladder.
- Bowel was mobilized till the level of fistula with due care to preserve vas and ureter.
- Fistula was ligated and divided following which only division was done without ligation, leaving behind a small rim near the urethra. Higher the fistula, easier was the technique and dissection were terminated as bowel became significantly narrow.
- Anterior traction on the fistula shows bilateral pubococcygeus fibers as a 'horse - shoe'. External muscle stimulation identifies the limits of sphincter complex.
- A midline incision was made and dissection done in the

Volume 12 Issue 4, April 2023

[www.ijsr.net](http://www.ijsr.net)

Licensed Under Creative Commons Attribution CC BY

midline with guidance of laparoscopic blunt suction cannula.

- Plane is then dilated with Hegar's dilators (10 - 12 mm) by railroading over the suction cannula following which a 10 mm trocar was introduced to deliver the rectum at

perineum with a Babcock clamp. A 16 stitch anoplasty was completed after ensuring anatomic orientation of the bowel.

- A rectopexy was done over presacral fascia with 2 - 0 silk sutures to prevent prolapse.



### 3. Result and Conclusion

- Between 2018 - 2020, 9 male children with high ARM were operated by LAARP. All patients have completed classical three - stage operation (neonatal colostomy, LAARP and colostomy closure) & all had successful outcome without any major complications
- Follow - up ranged from 6 to 36 months (mean 18.6 months) after colostomy closure, which was done 2 months following LAARP.
- LAARP is feasible, reproducible and effective approach male high ARM with good validation

### References

- [1] Georgeson KE, Inge TH, Albanese CT. Laparoscopically assisted anorectal pull - through for high imperforate anus - A new technique. *J Pediatr Surg.*2000; 35: 927 - 30.
- [2] Tsuji H, Okada A, Nakai H, Azuma T, Yagi M, Kubota A. Follow - up studies of anorectal malformations after posterior sagittal anorectoplasty. *J Pediatr Surg.*2002; 37: 1529 - 33.
- [3] Bhandary KS, Kumaran V, Rajamani G, Kannan S, Mohan NV, Rangarajan R, et al. Laparoscopic assisted

anorectal pull through: Reformed techniques. *J Indian Assoc Pediatr Surg.*2009; 14: 210 - 4.

- [4] Ichijo C, Kaneyama K, Hayashi Y, Koga H, Okazaki T, Lane GJ, et al. Midterm postoperative clinic radiologic analysis of surgery for high/intermediate - type imperforate anus: Prospective comparative study between laparoscopy - assisted and posterior sagittal anorectoplasty. *J Pediatr Surg.*2008; 43: 158 - 62.
- [5] Lin CL, Wong KK, Lan LC, Chen CC, Tam PK. Earlier appearance and higher incidence of the rectoanal relaxation reflex in patients with imperforate anus repaired with laparoscopically assisted anorectoplasty. *Surg Endosc.*2003; 17: 1646 - 9.
- [6] K, Khong PL, Lin SC, Lam WW, Lan LC, Tam PK. Post - operative magnetic resonance evaluation of ter laparoscopic anorectoplasty for imperforate anus. *Int J Colorectal Dis.*2005; 20: 33 - 7.