ISSN No:-2456-2165

Pelvic Organ Prolapse Suspension (POPS) in a Case of Uterine Prolapse with Rectal Prolapse – A Case Report

Dr. Purohit Naresh Kumar (Resident, Department of General Surgery),
Dr. Muruganandam G.M. (Resident, Department of General Surgery),
Dr. Jatin G. Bhatt (Professor and HOD, Department of General Surgery),
Dr. J.G. Vagadia (Assistant Professor, Department of General Surgery),
Pandit Deendayal Upadhyay Medical College and Civil Hospital, Rajkot

Abstract:- Pelvic organ prolapse suspension (POPS) is a recent surgical procedure for one-stage treatment of multi-organ female pelvic prolapse. Laparoscopic lateral suspension (LLS) is a promising option that gives satisfactory anatomical and functional results. We here present a case of 52 year's female patient with uterine prolapse with rectal prolapse operated with laparoscopic lateral suspension.

Keywords:- *Uterine prolapse, Rectal prolapse, Pelvic organ prolapse suspension (POPS), Laparoscopic lateral suspension (LLS).*

I. INTRODUCTION

Pelvic organ prolapse (POP) is a common and distressing condition. It is seen in 40% to 60% of parous women [1-3]. The aetiology of POP is multifactorial and complex [3]. A descent of the pelvic organs (uterus, vagina, bladder or bowel) occurs when there is a weakness in the supporting structures of the pelvic floor. Vaginal childbirth and hysterectomy are the major accepted initializing factors [4]. A woman can present with prolapse of one or more of these organs. A variety of urinary, bowel and sexual symptoms may be associated. In cases of POP, different surgical approaches have been proposed and accepted. Traditionally, pelvic floor problems have been addressed through abdominal, vaginal or perineal approaches. Over the past decade, more and more minimally invasive procedures have been reported and refined. Pelvic organ prolapse suspension (POPS) is one of the newest surgical techniques that have been introduced for prolapse repair. We report herein a case of uterine prolapse with rectal prolapse, operated with laparoscopic lateral suspension (LLS).

II. CASE REPORT

A 52 years female patient with marital life of 35 years and having 6 children, all born through normal vaginal delivery, presented with mass coming out of vagina and anus since 10 years[Fig-1]. There was associated complaints of urinary incontinence since 1 year and faecal incontinence since 2 months. She was vitally stable upon admission, and her blood counts were normal with normal renal parameters and serum electrolytes. Abdomen x-ray and Ultrasonography of Abdomen and pelvis was normal.

Patient was planned for POPS with Laparoscopic Lateral Suspension (LLS).

Under general anaesthesia, with patient in lithotomy position, painting and draping done. Pneumoperitoneum was established via supra-umbilical port incision and laparoscope was introduced. The procedure included the following steps:

- Using a prolene mesh, V-shaped strip was made with approximately 25 cms. length and 2cms. wide.
- On the right side of abdomen, a skin incision about 2 cms was made 2cms above and 2 cms posterior to anterior superior iliac spine[Fig-2], and sub-peritoneal tunnel was created which can be followed through the transparency of peritoneum till the anterior fornix of vagina[Fig-3].
- One end of v-shaped mesh was passed through this tunnel and taken out at the skin opening.
- Following same steps, the other end of the strip was passed through the left sub-peritoneal tunnel.
- The mesh was fixed to both the lateral vaginal fornices and the pelvic organ suspension was achieved by symmetrical traction applied through both the strips of the mesh.
- The second assistant was informed when the vaginal vault was suspended at the desired level, to completely reduce the vaginal prolapse.
- The excess mesh strips were fixed by tunnelling the muscle's fascia at the skin incision.
- The v-shaped base of the mesh was fixed at the anterior vaginal fornix by suturing[Fig-4].

While reducing the recto-anal prolapse, the rectal wall was found to be friable due to chronic prolapse, and hence rectum was inadvertently perforated, and for which laparoscopy was converted to open laparotomy.

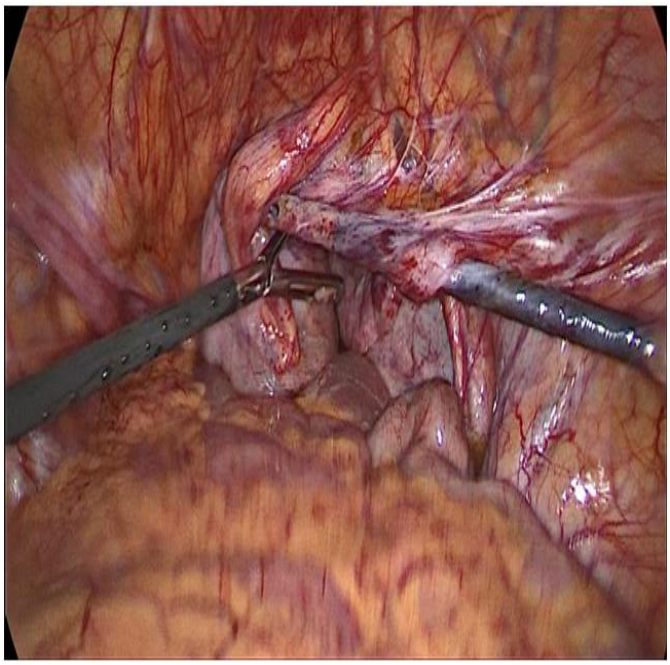
Lower midline vertical incision of approximately 8cms extending from umbilicus to 1cm above pubic symphysis pubis was made. On exploration, a 2*2 cm2 perforation was noticed in the anterior wall of rectum. Using Chivate's rectoscope , posterior rectopexy was done using double

ISSN No:-2456-2165

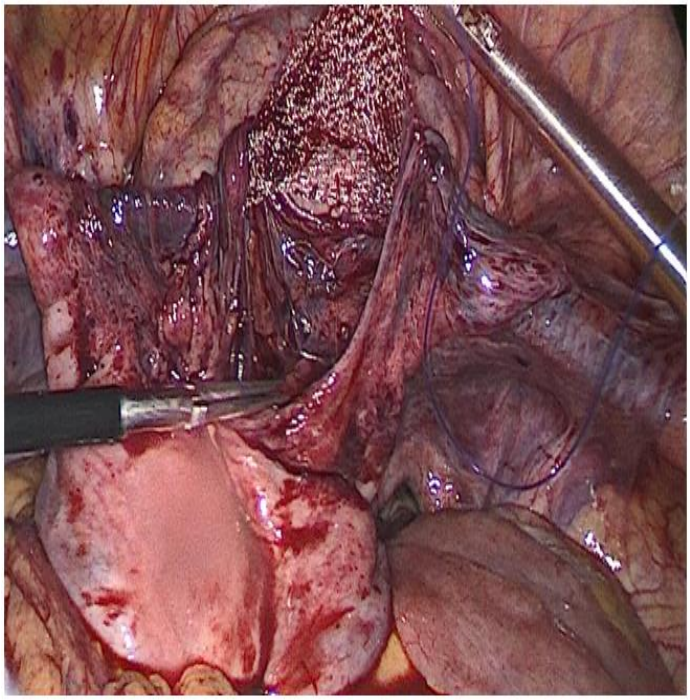
layered mucosal suture mucopexy technique[Fig-5]. The rectal perforation was repaired by primary closure in 2 layers, and abdomen was closed in layers. Patients post-operative period was uneventful. Patient was started orally on POD - 9. Patient was discharged within few days after starting orally with no complications. Upon follow-up, patient was stable without any complaints of urinary or faecal incontinence or any mass coming out per vaginum or per anum. She was passing urine and stool spontaneously.

[Fig-1]-Pre-operative picture depicting vaginal and rectal prolapse.

[Fig-2]-Sub-peritoneal tunnel creation in the right side abdominal wall.

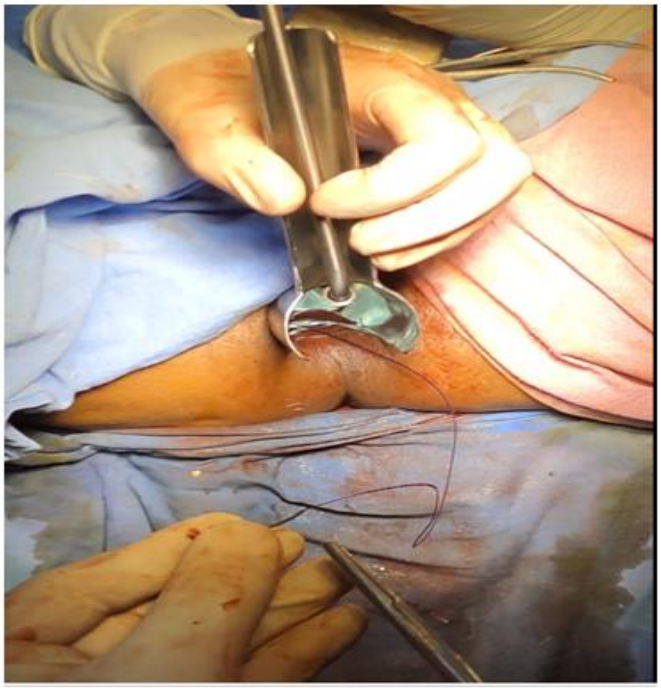


[Fig-3] Creation of subperitoneal tunnel upto lateral fornix of vagina on right side



[Fig-4] Both the strips of the mesh were inserted into the subperitoneal tunnels, and the base of the mesh was fixed at the anterior vaginal fornix.

ISSN No:-2456-2165



[Fig-5] Chivate's rectopexy was done after suspension of prolapse

III. DISCUSSION

A review of the literature has shown, that POPS is a further development of the method of ventral vaginopexy first described by Williams and Richardson in 1952. Instead of mesh implantation, Williams and Richardson fixed the vagina with two extra-peritoneally transmitted strips of the right and left oblique aponeurosis [6,7]. In 1967 Kapandji [8] proposed the suspension of the vagina by tense subperitoneal skin-strips from the anterior superior iliac spines to the vagina. The truly innovative aspect of POPS is the laparoscopic approach and the suspension of the vagina using a mesh that has the ability to provide adequate anatomical support.

Although POPS is increasingly applied, publications on POPS are scarce. To our knowledge there exist only two publications in peer reviewed journals. Both originate from the study group of Ceci *et al.* (University of Rome and A. Fiorini Hospital of Terracina [5,9]). They describe preliminary results of POPS in 54 respectively 73 patients. All patients underwent at the same time stapled transanal rectal resection (STARR) to correct the residual prolapse. Patients were evaluated after one year follow-up. The majority of patients presented with an important reduction of the pre-operative symptomatology. One year following POPS, in 76% of patients rectal prolapse and in 83% of patients rectocele was no longer detectable and no patient was incontinent for stool. The most frequent surgical complication was defecation urgency (18%) [5]. Further case studies and follow-up studies are not yet available.

This laparoscopic procedure has achieved widespread use and popularity over the past decade. However, mesh associated complications are frequently discussed, as there is a lack of strong evidence to support the routine use of mesh in pelvic floor reconstructive surgery (Level 3 evidence). Special attention should be paid to possible mesh related complications and long-term sequelae that could have a significant impact on quality of life [10].

Laparoscopic POPS is now an accepted surgical treatment for POP. Although POPS gains more and more widespread use, it remains a relatively new procedure and up to now it has been subject to limited research. The fact that at present there exist only publications of one study group makes an objective evaluation of this procedure impossible. The follow-up of patients is limited to 12 months. This means, that there is a lack of data about possible complications and long-term results. Further studies are necessary to assess the value of this technique and to reveal typical complications.

REFERENCES

[1]. Handa VL, Garrett E, Hendrix S, Gold E, Robbins J (2004) Progression and remission of pelvic organ prolapse: a longitudinal study of menopausal women. Am J Obstet Gynecol 190: 27-32.
[2]. Hendrix SL, Clark A, Nygaard I, Aragaki A, Barnabei V, et al. (2002) Pelvic organ prolapse in the Women's Health Initiative: gravity and gravidity. Am J Obstet Gynecol 186: 1160-1166.
[3]. Maher C, Feiner B, Baessler K, Schmid C (2013) Surgical management of pelvic organ prolapse in women. Cochrane Database Syst Rev 4: CD004014.
[4]. Bump RC, Norton PA (1998) Epidemiology and natural history of pelvic floor dysfunction. Obstet Gynecol Clin North Am 25: 723-746.
[5]. Ceci F, Spaziani E, Corelli S, Casciaro G, Martellucci A, et al. (2013) Technique and outcomes about a new laparoscopic procedure: the Pelvic Organ Prolapse Suspension (POPS). Il Giornale di chirurgia 34: 141-144.
[6]. Dickgiesser U, Ohlenroth G, Opitz V, Dickgiesser A (1983) The Williams-Richardson vaginopexy as a surgical therapy in vaginal inversion in vaginal stump prolapse. Geburtshilfe Frauenheilkd 43: 620-624.
[7]. Heidenreich W (1997) Williams-Richardson vaginopexy. An abdominal suspension operation in prolapse and extensive vaginal descent. Zentralbl Gynakol 119: 378-382.
[8]. Kapandji M (1967) Treatment of urogenital prolapse by colpo-isthmocystopexy with transverse strip and crossed, multiple layer, ligamentoperitoneal douglasorrhaphy. Annales de chirurgie 21: 321-328
[9]. Ceci F, Spaziani E, Casciaro G, Corelli S, Martellucci A, et al. (2013) Multiorgan female pelvic prolapse: pelvic organ prolapse suspension (P.O.P.S.) stapled transanalrectale resection (S.T.A.R.R.): new surgical tecniques and results. Annaliitaliani di chirurgia 84: 711-713.
[10]. Lundby L, Laurberg S (2015) Laparoscopic ventral mesh rectopexy for obstructed defaecation syndrome: time for a critical appraisal. Colorectal Dis 17: 102-103