

Abdominal Sacrohysteropexy with Synthetic Prolene Mesh: A Conservative Approach for the Management of Uterovaginal Prolapse in Young Patients

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ABSTRACT

Aim: To evaluate the results of sacrohysteropexy with synthetic prolene mesh as a conservative approach for the management of uterovaginal prolapse in young women who want to conserve their uterus.

Design: Descriptive study.

Setting: The study was conducted in Lady Willingdon Hospital, Lahore from June 2012 to May 2015.

Methods: Sixty women with uterovaginal prolapse were included. The surgical technique used in abdominal sacrohysteropexy was described as: the one end of synthetic prolene mesh was attached to isthmus of the uterus and the other end to the anterior longitudinal ligament of the first or second sacral vertebra and there should be no tension on this mesh. The patients were asked about improvement in their subjective and objective cure of uterovaginal prolapse symptoms. Their operative and postoperative complications were also noted.

Results: Sixty patients were identified. Majority of the women were in the age group 31-40 years. Regarding marital status and parity, four women were unmarried and rest all married. Forty three patients belonged to parity P1-P4 and eleven patients were between P5-P9. Thirty nine patients had 2nd degree uterovaginal prolapse, twenty one patients had 3rd degree prolapse. In all patients, abdominal sacrohysteropexy was performed using prolene mesh in a tension free fashion. Intraoperative and postoperative complications were not observed for the said procedure. At the time of discharge, patients were asked about improvement in uterovaginal symptoms and physical examination was performed and none of the patients had any uterovaginal prolapse symptoms. Out of sixty patients, sixteen patients had spontaneous conception after abdominal sacrohysteropexy.

Conclusion: Abdominal sacrohysteropexy with synthetic prolene mesh is considered as best and safe conservative approach in the management of uterovaginal prolapse in young women who want to conserve their uteri. This conservative procedure helps in the maintenance of anatomy and normal axis of the female reproductive tract and it has no interference with the sexual function. The success rate of abdominal sacrohysteropexy is best and complications of the procedure are less.

Keywords: Sacrohysteropexy, uterovaginal prolapsed, uterus

INTRODUCTION

Uterovaginal prolapse is caused by protrusion of uterus into or outside the vagina. It occurs as a result of failure of interaction between the ligaments, fascial supports and levator ani muscles^{1,2}. The other organs are also involved with the prolapse like vaginal walls bladder or rectum. There are various presentations of the uterovaginal prolapse. Sometimes it is asymptomatic and picked up incidentally on vaginal examination^{3,4}. Sometimes it elicits severe symptoms which disturb the life of the women. The symptoms are lower abdominal pain or backache, feeling of lump in vagina or vaginal discharge. It can coexist with urinary or fecal symptoms. When prolapse is severe, the uterus is totally bulged outside vagina. It also leads to ulceration, infection and irritation of the vaginal skin^{8,9,10}.

It poses a real-world challenge and dilemma for a pelvic reconstructive gynecological surgeon to manage uterovaginal prolapse in young women and those who want to conserve their uterus. Because the gynecological procedures are usually designed to treat older women who have no issue regarding their fertility, uterine conservation or coital function^{6,7}. In young women, the surgical objectives of the treatment are correction of uterovaginal

prolapse, preservation of normal functioning vaginal axis and retention of fertility potential^{5,6,7}. Several techniques were used for the treatment of uterovaginal prolapse in younger age group and those who desire to conserve their uterus⁵.

The objectives of this research was to assess the effectiveness of abdominal sacrohysteropexy with synthetic prolene mesh in the treatment of uterine prolapse in younger age group and those patients who want to conserve their uterus.

METHODS AND MATERIALS

This research was conducted in obstetrics and gynecology department of Lady Willingdon Hospital, Lahore from June 2012 to May 2015. All the patients who had undergone sacrohysteropexy were included in the study. Sixty women who wished to conserve their uterus were evaluated through a questionnaire and physical examination. Each case record was analyzed regarding age, parity, marital status, fertility wishes, anesthesia required, operative time, type of procedure, type of mesh used. The success rate of the procedure is calculated by improvement in subjective and objective symptoms, postoperative complications. It is also noticed that how this operation changed patient's life.

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RESULTS

Age:

Age(years)	n	%age
21-30	23	38
31-40	31	52
41-50	6	10

Marital status:

Marital status	n	%age
Married	56	93
Unmarried	4	7

Parity:

Parity	n	%age
Nulliparous	6	10
P1-P4	43	72
P5-P9	11	18

Type of prolapse:

Type of prolapse	n	%age
2 nd degree uterovaginal prolapse	39	65
3 rd degree uterovaginal prolapse	21	35

Fertility wishes:

54 patients wished to retain their fertility	6 patients had no fertility wishes but retain uterus as an integral part
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Operative technique: Abdominal sacrohysteropexy was carried out under general anaesthesia. Urinary bladder was catheterized. Abdomen was opened by low transverse incision. After opening the abdomen, the small intestine was packed with the help of sponge. The posterior peritoneum was dissected out at the level of sacral promontory to expose the anterior ligament on the first and second sacral vertebrae. This flap was dissected down till pouch of Douglas upto level of isthmus or posterior cervicouterine junction. Then prolene mesh was taken. One end of the mesh was sutured to the anterior longitudinal ligament by using prolene no. 1 and other end was attached to the isthmus/posterior cervicouterine junction. The mesh was placed in a tension free manner on the pelvic floor and sacral hollow. The flaps of posterior peritoneum were closed over the mesh. A peritoneal drain was placed.

Duration of surgery: 60-90 minutes

Need for blood transfusion: There is no need for blood transfusion in any case.

Complications: During the procedure of abdominal sacrohysteropexy no per operative or post operative complication observed. At the time of discharge, inquiring about symptoms and physical examination, no patient had any uterovaginal prolapse symptoms.

Success rates: The success rate of the procedure was calculated whether the symptoms of uterovaginal prolapse were cured or not. We believe that management of uterovaginal prolapse in younger women age group where uterus is to be conserved, is a real world challenge. The safety and effectiveness of abdominal sacrohysteropexy is excellent in the treatment of these patients with minimal complications.

DISCUSSION

Uterovaginal prolapse affects thousands of women. It takes long time to develop prolapse up to different degrees. Damage to the pelvic floor supporting muscles during the process of child birth is responsible for development of uterovaginal prolapse. The conservation of uterus as a successful treatment of uterovaginal prolapse is a surgical challenge for the gynecological pelvic floor surgery. The objectives of these conservative techniques are to obtain the relief of symptoms of women, correction of uterovaginal prolapse, preservation of urinary/fecal continence issues and maintenance of coital function.

In our study, sixty patients participated. Majority of the women were in the age group of 31-40 years. Fifty six were married and four were unmarried. Mostly belonged to P1-P4, fifty four wished to retain their fertility, six had no fertility wishes but retain uterus as an integral part of them. Similar trends were observed by Leron E, Fritel X and Demirci F^{2,6,7}. Thirty nine patients had 2nd degree uterovaginal prolapse and twenty one had 3rd degree prolapse. These results were also similar to the above mentioned studies^{2,6,7}.

In the present study, we performed abdominal sacrohysteropexy on all patients. Additional surgical procedures were not performed. In contrast to this, other studies by Leron E, Fritel X and Demirci F performed burch colposuspension, posterior repair, and mesh extension anteriorly and posteriorly to correct the cystocele and rectocele^{2,6,7}.

In our study, majority of the patients had minimal cystocele and rectocele. Few patients had moderate cystocele and rectocele but these patients had no urinary or bowel symptoms, therefore no additional surgical procedure required. These were corrected by lifting the uterus up by sacrohysteropexy.

Operative time in the said procedures was 60-90 minutes. All surgical procedures were performed under general anaesthesia and easy post operative recovery was favourable point for these procedures.

We use prolene mesh in all patients. It is said that prolene mesh behaves like a foreign body and it is meant to have a theoretical risk of infection/erosion to the adjacent structures where it lies in close relation. It may have the tendency to develop adhesions with the surrounding bowel leading to the onset of symptoms/signs of acute/chronic intestinal obstruction. All women explained and counselled about these potential complications. Although in our study, we have not observed any of these complications i.e., erosion, infection or rejection of prolene mesh. Because of its safety profile, we decided to continue the use of prolene mesh as a preferable material in the procedures of abdominal sacrohysteropexy.

As far as the improvement in symptoms is concerned in terms of objective/subjective cure, it is shown that the conservative technique produces satisfactory and durable functional results by restoring the anatomy.

In our study, the anatomical support is restored by maintaining the normal & functional vaginal axis in all women. At the time of discharge, when physical examination was carried out, the uterovaginal prolapse was

corrected and patients have felt relief of their symptoms. Out of 54 patients, 16 patients conceived spontaneously.

CONCLUSION

Abdominal sacrohysteropexy with prolene mesh is considered safe and effective as far as the improvement in symptoms is concerned. It is shown that said conservative approach produces satisfactory and durable functional results by restoring the anatomy and helps in maintaining the vaginal axis and coital function in all women who want to conserve the uterus. The results are best with minimal complications.

REFERENCES

1. Fraj R, Broome J : Laparoscopic sacrohysteropexy and myomectomy for uterine prolapse: A case report and review of the literature. *Journal of Medical Case report* 2009; 3: 99.
2. Leron E, Stanton SL: Sacrohysteropexy with synthetic mesh for the management of uterovaginal prolapse. *BJOG* 2001; 108(6): 629-633.
3. Stanton SL: Vaginal prolapse. In, Shaw RW(ed): *Gynaecology*. Edinburgh, 2003, 813-817.
4. Cutner A, Kearney R, Vashisht A: Laparoscopic uterine sling suspension: A new technique of uterine suspension in women desiring surgical management of uterine prolapse with uterine conservation. *BJOG* 2007; 114(9): 1159-1162.
5. Maher CF, Carey MP, Murray CJ: Laparoscopic suture hysteropexy for uterine prolapse. *Obstet Gynecol* 2001; 97: 1010-1014.
6. Barranger E, Fritel X, Pinge A: Abdominal sacrohysteropexy in young women with uterovaginal prolapse: Long-term follow up. *Am J Obstet Gynecol* 2003; 189(5): 1245-1250.
7. Demirci F, Ozdemir I, Somunkiran A, Doyran GD, Alhan A, Gul B: Abdominal sacrohysteropexy in young women with uterovaginal prolapse: Results of 20 cases. *J Reprod Med* 2006; 51(7): 539-543.
8. Crafoord K, Sydsjo A, Nilsson K : Primary surgery of genital prolapse: A shift in treatment tradition. *Acta Obstet Gynecol Scand* 2006; 85(9): 1104-1108.
9. Campbell S, Monga A: Uterovaginal prolapse. In, Campbell S, Monga A (ed): *Gynaecology by Ten Teachers*; Arnold, 2000, 217-220.
10. Stanton SL: Vaginal prolapse. In, Edmonds DK(ed): *Dewhurst Textbook of Obstetrics and Gynaecology for Postgraduates*. Graphicart, 1999, 463-466.