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Case Series

Successful nonsurgical management of pelvic organ prolapse in infertility: a case series

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ABSTRACT

Pelvic organ prolapse is a less commonly cited cause of female factor infertility. This could be attributed to cervical factor or to distorted utero tubal relationship. When the cervix constantly lies outside the vagina, there is impaired venous return resulting in congestion, inflammation and ulceration, which is further aggravated by friction. Cervical dryness even hampers sperm and cervical mucus interaction leading to impaired capacitation. Here, we present 4 cases of cervico vaginal descent where main presenting complain was inability to conceive and were diagnosed to have prolapse on clinical workup. These cases had successful pregnancy outcome after conservative management with the placement of vaginal ring pessary of appropriate size. This repositions the cervix inside vagina, reduces cervical oedema, dryness and restores cervical mucus formation.

Keywords: Prolapse, Vaginal pessary, Pregnancy in women with prolapse, Female infertility, Infertility evaluation

INTRODUCTION

Pelvic organ prolapse is a less commonly cited cause of female factor infertility. The reason can be the clinical presentation, which is largely in the form of symptoms associated with prolapse like bulge symptoms, pelvic heaviness, discomfort, bladder and bowel symptoms. Cervix, when lies outside the vagina, often leads to cervical erosion, excoriation, congestion and dryness leading to abnormal sperm mucus interaction and cervical factor infertility. Uterocervical descent leads to distorted utero tubal anatomy and is also one of factors leading to infertility, although to a lesser extent.¹

Here, we present 4 cases of cervico vaginal descent where main presenting complain was inability to conceive and were diagnosed to have prolapse on clinical workup. These cases had successful pregnancy outcome after conservative management.

CASE SERIES

Case 1

A 32 years old, para 1, presented to infertility outpatient department (OPD) with secondary infertility for three years. She had a history of spontaneous conception within six months of marriage. In her first pregnancy, her antenatal period was uneventful, however, during the second stage of labour, forceps were applied to deliver 3.5 kg baby. There was associated 3rd degree perineal tear which was simultaneously repaired. Three months after this, she started complaining of something coming out per vagina which gradually increased since then and now, it was associated with frequent urination, constipation and backache. On examination, she had stage 2 pelvic organ prolapse. She has not been able to conceive for last 3 years in spite of regular unprotected sexual activity. Keeping in mind her previous spontaneous pregnancy, tubal factor and male factor infertility were ruled out. Her menstrual cycles

were regular and day 21 progesterone level was also found to be within normal limit. The reason was attributed to cervical factor infertility, since cervix was dry and was lying completely outside vagina with no cervical mucus. It was decided to use acriflavine and glycerine packing to decrease cervical inflammation and congestion. She was counselled and treatment options provided i.e. abdominal sacro hysteropexy using mesh or conservative management with vaginal pessary. After written informed consent, vaginal pessary of appropriate size placed and trial of spontaneous pregnancy given. Her symptoms significantly improved after pessary placement and anatomical restoration of the uterus also improved satisfaction with sexual intercourse. She spontaneously conceived within two cycles. Pessary was removed at 16 weeks of gestation when her pelvic organ prolapses reduced to stage 2. She then underwent normal vaginal delivery and delivered 3kg baby boy. After delivery, prolapse recurred within six months and she had stage 2 prolapse, nine months postdelivery, for which she finally underwent abdominal sacro hysteropexy.

Case 2

A 30 years old nulliparous women came to gynaecology OPD for stage 3 pelvic organ prolapse and primary infertility for three years. She first noticed it three years back and it has been gradually increasing since then, with backache and pelvic discomfort. There is no difficulty in urination or defecation. Conservative management planned after informed consent and vaginal ring pessary of appropriate size placed, after ruling out male factor and tubal factor infertility. On examination, she had stage 3 prolapse with inflamed and congested cervix, lying 2 cm below hymen (Figure 1). She conceived spontaneously within three cycles of placement of ring pessary. Her first trimester was uneventful. Prolapse spontaneously reduced to stage 2 at 20 weeks of gestation, hence pessary was removed and pregnancy continued (Figure 2). She underwent caesarean at 38 weeks due to foetal indication and delivered a baby boy of 2.9 kg. Postnatal period was uneventful and there was prolapse recurrence at six months postpartum for which definitive surgery was done.



Figure 1: Stage 3 prolapse.



Figure 2: After pessary insertion.

Case 3

A 29 years old women presented to infertility OPD with complain of something coming out per vagina and secondary infertility for last three years. She had history of missed abortion at two months amenorrhea after spontaneous conception. The couple had been trying to conceive since the abortion. There was no associated bladder or bowel complain. On pelvic examination, she had stage 2 prolapse. Cervix was oedematous and congested. After thorough discussion with the patient regarding treatment options, she went for conservative management. Acriflavine and glycerine packing advised and ring vaginal pessary of appropriate size placed. Patient was also counselled regarding the fertile period and timed intercourse advised. She spontaneously conceived after three cycles. Pessary was left in situ while the pregnancy continued. It was removed at 20 weeks period of gestation, when uterus became an abdominal organ. Rest of the pregnancy continued uneventfully and delivered a baby girl of 2.5 kg vaginally. Definite surgery for prolapse done at six months after delivery.

Case 4

A 34 years old women came to gynaecology OPD with infertility for four years and stage 2 pelvic organ prolapse. She first noticed it three years back and it has been increasing since then. There is backache, lower abdominal discomfort with no bladder or bowel complains. She has not been able to conceive for last four years in spite of regular unprotected sexual activity. It was decided to give her a trial of vaginal pessary placement and patient refused to undergo surgery. Ring vaginal pessary of appropriate size would help in reducing the oedema and inflammation, maintaining cervical mucus production and lubrication. She conceived within four months of pessary placement. Her pregnancy was uneventful with full term normal vaginal delivery at 38 weeks. However, there was prolapse recurrence at six months and she underwent operative management at one year.

DISCUSSION

Pelvic organ prolapse is the descent of uterus, cervix, anterior and posterior vaginal wall alone or in combination, owing to weakness of pelvic floor muscles. It affects millions of women worldwide and is the third most common cause of hysterectomy. Symptoms include vaginal bulging, pelvic pressure and splinting or digitation.

In young reproductive age group women, prolapse can lead to infertility in an otherwise healthy couple. This could be attributed to cervical factor or to distorted utero tubal relationship. When the cervix constantly lies outside the vagina, there is impaired venous return resulting in congestion, inflammation and ulceration, which is further aggravated by friction. Cervical dryness even hampers sperm and cervical mucus interaction leading to impaired capacitation. These factors contribute to uterine and cervical factor infertility which affects 3-5% of infertile women.

Treatment options for these women are conservative and surgical management. Surgical options are more commonly used and these include sling surgeries, which restores uterus and cervix to their complete anatomical position. Although these methods achieve complete anatomical restoration, they are cumbersome, need expertise and are associated with complications. Conservative management includes placement of vaginal pessary of appropriate size. This repositions the cervix inside vagina, reduces cervical oedema, dryness and restores cervical mucus formation. Its advantage being simple, cheap, low risk and highly effective.

Vaginal ring pessary places cervix to its anatomical position, reducing friction, improving venous return, restoring cervical lubrication and sperm mucus interaction. They are often used for women who are either unfit or unwilling for surgery. Now a days, vaginal pessaries are made up of silicone or inert plastic and they are safe and simple to manage.² In the above-mentioned patients, ring pessary was used, which is a type of support pessary. It uses spring mechanism that rests in the posterior fornix and against the posterior aspect of pubic symphysis. When properly fitted, the device should lie behind the pubic symphysis anteriorly and behind the cervix posteriorly. Common complications associated with vaginal pessary are vaginal discharge, odour, mucosal erosion, vaginal abrasion and urinary retention.³

In the first case, the women had pelvic discomfort and voiding dysfunction which are classical symptoms of pelvic organ prolapse. She also had history of a previous traumatic vaginal delivery leading to weakening of pelvic floor muscles. Prolapse in pregnancy leads to uterine descend, stretching of uterine supports, kinking of urethra and finally the urinary symptoms.⁴ Insertion of a pessary helped in restoring the anatomy of the uterus, bladder, and urethra, and hence alleviating these symptoms. Keeping in mind that her previous pregnancy was spontaneous

conception and the only new finding was recent development of uterovaginal prolapse, cervical factor was considered as the cause of her infertility.

Rest of the three patients had prolapse since before marriage. Previous history of spontaneous conception helps in establishing intact tubal function and ruling out male factor associated infertility. New factor that could be appreciated was increase in the stage of prolapse, again pointing towards cervical factor infertility. So, a trial of ring vaginal pessary of appropriate size not only helped in relieving the symptoms, but also alleviated the infertility caused by abnormal sperm and cervical mucus interaction. All our cases were successfully managed with ring pessary as its size perfectly fitted them. The patients were taught pessary care and were using it independently. Thus, selection of pessary shape and its size and the patient's congruity to the treatment are the basis of success of this management.

After thorough review of literature, it was found that, in most of these cases, primary surgeries were done to reduce prolapse, which lead to spontaneous conception. There is very sparse literature regarding spontaneous pregnancy after use of vaginal pessary in advanced pelvic organ prolapse. Most of these patients are directly taken up for uterine sparing surgery.

In a study by Fernando et al, it was found that there was a significant improvement in sexual function (both frequency and satisfaction) four months after pessary use.⁵ Most women seen in their clinic were anxious about having sexual intercourse after insertion of the vaginal pessary. The findings of the study provide reassurance to women that a vaginal pessary may not interfere mechanically with sexual activity and may even improve sexual function.

Vaginal pessary should be used throughout pregnancy.^{6,7} It helps to keep the prolapsed part repositioned and avoids local trauma. Prolapse of the cervix would lead to swelling, infection, and further related complications, therefore it also maintains good hygiene and avoids complications during pregnancy.⁸⁻¹¹

CONCLUSION

Basic gynaecological examination is a must in all patients with infertility. Prolapse can lead to infertility owing to displacement or distortion of uterotubal relationship and cervical dryness. Simple conservative management in the form of vaginal ring pessary can revert these changes leading to conception. Hence, Infertile women with prolapse should be given a trial of ring pessary before straightaway going for surgical intervention which might be a futile exercise altogether.

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REFERENCES

1. Speroff L, Fritz MA. *Clinical Gynecologic Endocrinology and Infertility*. 7th edition. Philadelphia: Lippincott Williams & Wilkins. 2005.
2. Atnip SD. Pessary use and management for pelvic organ prolapse. *Obstet Gynecol North Am.* 2009;36:541-63.
3. Sulak PJ. Nonsurgical correction of defects, the use of vaginal support devices. 8th edition. Te Linde's *Operative Gynecology*. 1997;1082-3.
4. O'Boyle AL, O'Boyle JD, Calhoun B, Davis GD. Pelvic organ support in pregnancy and postpartum. *Int Urogynecol J.* 2005;16(1):69-72.
5. Fernando RJ, Thakar R, Sultan AH, Shah SM, Jones PW. Effect of vaginal pessaries on symptoms associated with pelvic organ prolapse. *Obstet Gynecol.* 2006;108: 93-9.
6. Hill PS. Uterine prolapse complicating pregnancy. A case report. *J Reprod Med.* 1984;29(8):631-3.
7. Brown HL. Cervical prolapse complicating pregnancy. *J Nat Med Assoc.* 1997;89:346-8.
8. Jeng CJ, Lou CN, Lee FK, Tzeng CR. Successful pregnancy in a patient with initially procidentia uteri. *Acta Obstet Gynecol Scand.* 2006;85:501-2.
9. Büyükbayrak EE, Yilmazer G, Ozyapı AG, et al. Successful management of uterine prolapse during pregnancy with vaginal pessary: a case report. *J Turk Ger Gynecol Assoc.* 2010;11:105-6.
10. De Vita D, Giordano S. Two successful natural pregnancies in a patient with severe uterine prolapse: A case report. *J Med Case Rep.* 2011;5:459.
11. Mohamed-Suphan N, Ng RK. Uterine prolapse complicating pregnancy and labor: a case report and literature review. *Int Urogynecol J* 2012;23:647-50.

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