

Unusual Pregnancy-Cervical Prolapse and Preterm Birth: A Case Report

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ABSTRACT

Cervical prolapse during pregnancy is quite rare. When it presents, it can be complicated by spontaneous abortions, preterm labour, cervical infections, and foetal and maternal mortality. To date, there is no set protocol for the management of this condition. In the present case of a 23-year-old unbooked third gravida, authors have discussed by discussing a 3rd gravida with the previous two live births presenting to the casualty with preterm labour pain and cervical prolapse in her trimester of pregnancy. She was initially managed by tocolysis, followed by insertion of a pessary, and her pregnancy was terminated at term by caesarean section. The management of cervical prolapse during pregnancy should take into consideration the gestational age and the degree of prolapse; it must be individualised to each patient.

Keywords: Cervical descent, High-risk pregnancy, Pelvic organ prolapse, Vaginal pessary

CASE REPORT

A 23-year-old unbooked third gravida, with a history of two previous vaginal deliveries-the first at home and the second in a hospital using forceps. She is currently 32 weeks and five days gestation. She presented to the casualty with complaints of something protruding from the vagina for the past 12 hours. Subsequently, she developed lower abdominal pain for the past eight hours and experienced difficulty in passing urine. There was no history of any chronic medical or surgical illness. Blood investigations were conducted to rule out sepsis, and the white cell count and C-reactive Protein (CRP) were within normal limits.

The patient's general condition was stable; she was lean, with a Body Mass Index (BMI) of 15.4 (height=180 cm, weight=50 kg). Systemic examination revealed no abnormalities. On obstetric examination, the uterus corresponded to a 32-week size, with a singleton pregnancy, longitudinal lie, cephalic presentation, and a suprapubic bulge [Table/Fig-1] (bladder distension was noted). Uterine contractions were present, with two contractions occurring in 10 minutes, each lasting around 25 seconds. Foetal heart sounds were regular, with a baseline of around 140 beats per minute.

During local examination, a congested, hyperaemic, and hypertrophied cervix was observed prolapsed out of the introitus [Table/Fig-2]. The cervix protruded 2 cm away from the plane of the hymen. Cervical and vaginal swabs were taken to rule out any local infection.

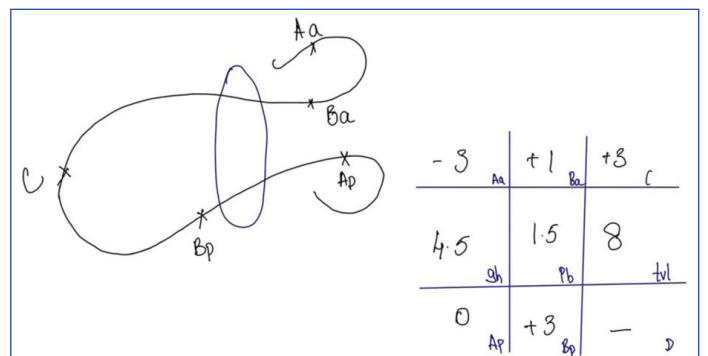


[Table/Fig-2]: Prolapse of the gravid cervix.

Under aseptic precautions, a vaginal examination was performed. The cervix was found to be soft, hyperaemic, hypertrophied, and patulous with a closed internal os. Cervical prolapse was graded as 3 according to the Pelvic Organ Prolapse Quantification (POP-Q) four-degree classification system, protruding out of the introitus [Table/Fig-3] [1]. Following informed, verbal, and written consent, a Foley's catheter was inserted, the cervix was manually reduced, and magnesium sulfate packing was performed [Table/Fig-4].



[Table/Fig-1]: Suprapubic bulge and cervical prolapse in pregnancy.



[Table/Fig-3]: Pelvic Organ Prolapse Quantification (POP-Q) imaging of the prolapse [1].

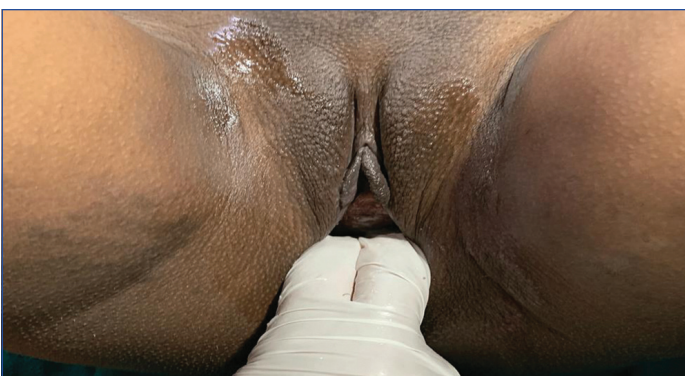


[Table/Fig-4]: Manual reduction of the prolapse.

The patient was started on tocolytic therapy and was administered Tab nifedipine 20 mg as a stat dose, followed by 10 mg TDS, which was tapered to Tab nifedipine 10 mg BD. A full regimen of steroid coverage was provided. A ring pessary option was discussed with the patient, and after obtaining informed written consent, a pessary insertion was performed under aseptic precautions. The size of the pessary was determined by measuring the distance between the posterior vaginal fornix and the external urinary meatus, deducting 1.25 cm from it. An ideal fit supportive ring pessary was placed against the symphysis pubis, resting in the posterior fornix. During her admission, the patient was instructed on the method of self-insertion and sterilising the pessary every 8-12 hours. The patient was monitored until preterm labour settled and she learned to insert the pessary by herself. Pelvic exercises were also taught to the patient. Once it was determined that the patient could independently insert the pessary, she was discharged with a plan for weekly follow-up. The patient was discharged five days after she was able to insert the pessary by herself and sterilise it every 12 hours.

During her regular Antenatal Care (ANC) follow-up at 38 weeks, she was admitted with a chief complaint of decreased foetal movements. Upon admission, a Non-stress Test (NST) was performed, which suggested variable decelerations, leading to her being shifted for Emergency Lower Segment Caesarean Section (EMLSCS). The obstetric outcome was a female child weighing 2.7 kg with an Appearance, Pulse, Grimace, Activity and Respiration (APGAR) score of 8. During intraoperative assessment, the cervix was found to be 1 cm below the level of the ischial spine.

During the postoperative period, the patient continued pelvic wall exercises and used the pessary. Subsequently, she was placed on follow-up every six weeks, during which bowel and bladder continence were assessed, and signs and symptoms of infection were monitored. Regular follow-ups every three months were advised. It was noted that the pessary prevented the cervix from prolapsing [Table/Fig-5].



[Table/Fig-5]: Image taken three months postpartum during follow-up.

DISCUSSION

Pelvic organ prolapse is defined as the partial or complete descent of pelvic organs through the vagina due to abnormalities in the supporting tissues [1,2]. Cervical prolapse during pregnancy is estimated to affect 1 in 10,000 to 15,000 deliveries globally [3]. Approximately 50% of women who have delivered a near-term infant [2] have some degree of clinically evident genital prolapse. The degree of prolapse can be measured using various systems such as Porgies (a three-degree system), Baden (a four-grade system), Beecham (a three-degree system), and the Pelvic Organ Prolapse Quantification (POP-Q) system in a non gravid uterus [1]. However, to date, no system or classification has been developed to measure the degree of prolapse in a gravid uterus.

Pelvic organ prolapse during pregnancy is relatively uncommon and rare [3]. As no definitive management guidelines have been issued, shedding light on this issue is crucial. There are numerous risk factors such as multiparity, vaginal deliveries, instrumental deliveries, connective tissue problems, obesity, and age. The management of pregnancy, labour, and delivery in these women varies considerably [4,5].

Genital prolapse may either develop during pregnancy or pregnancy may occur in a previously prolapsed uterus, which is likely in most cases [1]. Prolapse may occur when the supporting structures of the uterus become lax or are torn. If a woman has some degree of prolapse before becoming pregnant, it typically persists until the pregnancy reaches a point where spontaneous correction takes place. The uterus transitioning into an abdominal organ during the second trimester, which causes the cervix to be pulled up into the vagina, may be the cause of the spontaneous correction. The natural increase in cortisol and progesterone during pregnancy may exacerbate the prolapse by simultaneously softening and stretching the pelvic tissue [6].

Women in labour with pre-existing prolapse or those experiencing newly developed prolapse during pregnancy often face the complication of severe cervical dystocia due to a non retractable, oedematous cervix [3]. Spontaneous abortions are known to be associated with pre-existing prolapse. The management of cervical prolapse during pregnancy depends on the individual preferences of the doctor and the patient [7].

The addition of a pessary during the early stages of labour might help avoid cervical dystocia. These patients require multidisciplinary care along with stringent obstetric follow-up. Consideration of the obstetric future, follow-up, and pregnancy recommendations should be kept in mind [8]. Risks of premature delivery, halted dilatation during labour, shoulder dystocia, uterine rupture, and localised infections should always be anticipated. The surgical mode of treatment (2nd line) is taken up when conservative management fails or whenever the pelvic floor cannot be reverted to its original condition. The surgical method of reducing the prolapsed organ cannot be considered as the first line of management, as surgical and anaesthetic risks must be considered, which may have potentially disastrous effects on pregnancy [9].

Askary E et al., corrected stage 4 uterine prolapse with obstructed labour in a term patient by an emergency caesarean section, during which a fundal incision was given and the apical and lateral vaginal defects were corrected [10]. Barik A and Ray A discussed stage 3 uterine prolapse in a gravid woman with cervical fibroid, in which a Caesarean section was performed, and the patient was planned to be posted for laparoscopic sacrocolpopexy along with conservative management of the fibroid on a later date [6]. Maki J et al., suggested that when a patient with uterine prolapse is delivered vaginally, as in their scenario by an assisted method, cervical sutures should be considered in some cases [11].

In cases of cervical prolapse complicated by preterm labour, proper management can lead to a good perinatal outcome, and the

prolapse can be efficiently managed. Using a pessary in a preterm situation seems like a better option, as it protects the protruded cervix from local trauma and is also beneficial in keeping the cervix in the vagina during ambulation, as seen in the case discussed above.

CONCLUSION(S)

It was realised that the management of cervical prolapse during pregnancy should take into consideration the gestational age and the degree of prolapse. It must be individualised to each patient, requiring a multidisciplinary approach and frequent follow-ups throughout the pregnancy and in the postoperative period. A combination of conservative management with tocolytics, a vaginal pessary, and bed rest in women with preterm labour pains helps to achieve near-term gestation with very few complications.

REFERENCES

- [1] Persu C, Chapple CR, Cauni V, Gutue S, Geavlete P. Pelvic Organ Prolapse Quantification System (POP-Q)- A new era in pelvic prolapse staging. *J Med Life*. 2011;4(1):75-81.
- [2] Tsikouras P, Dafopoulos A, Vrachnis N, Iliodromiti Z, Bouchlariotou S, Piniadis P, et al. Uterine prolapse in pregnancy: Risk factors, complications and management. *J Matern Fetal Neonatal Med*. 2014;27(3):297-302.
- [3] Zeng C, Yang F, Wu C, Zhu J, Guan X, Liu J. Uterine prolapse in pregnancy: Two cases report and literature review. *Case Rep Obstet Gynecol*. 2018;2018:1805153. Doi: 10.1155/2018/1805153.
- [4] Pelvic Organ Prolapse: ACOG Practice Bulletin, Number 214. *Obstet Gynecol*. 2019;134(5):e126-42. Doi: 10.1097/AOG.0000000000003519.
- [5] Trutnovsky G, Kamisan Atan I, Martin A, Dietz HP. Delivery mode and pelvic organ prolapse: A retrospective observational study. *BJOG*. 2016;123(9):1551-56. Doi: 10.1111/1471-0528.13692.
- [6] Barik A, Ray A. A rare case of pregnancy complicated by uterine prolapse and cervical fibroid. *Cureus*. 2020;12(7):e9026.
- [7] Wang K, Zhang J, Xu T, Yu H, Wang X. Successful deliveries of uterine prolapse in two primigravid women after obstetric management and perinatal care: Case reports and literature review. *Ann Palliat Med*. 2021;10(6):7019-27.
- [8] Mohamed-Suphan N, Ng RK. Uterine prolapse complicating pregnancy and labor: A case report and literature review. *Int Urogynecol J*. 2012;23(5):647-50.
- [9] Ryan GA, Purandare NC, Ganerwal SA, Purandare CN. Conservative management of pelvic organ prolapse: Indian Contribution. *J Obstet Gynaecol India*. 2021;71(1):03-10.
- [10] Askary E, Alamdarloo SM, Karimi Z, Karimzade A. A rare case of obstructed labor due to severe uterine prolapse; a case report and literature review. *Int J Surg Case Rep*. 2022;97:107344.
- [11] Maki J, Mitoma T, Mishima S, Ohira A, Tani K, Eto E, et al. A case report of successful vaginal delivery in a patient with severe uterine prolapse and a review of the healing process of a cervical incision. *Case Rep Womens Health*. 2021;33:e00375.

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