

## A Case Series of Uterine Prolapse in Pregnancy

Shreedevi S Kori<sup>1</sup>, Dayanand S Biradar<sup>2</sup>, Rajasri G Yaliwal<sup>3</sup>,  
Subhashchandra R Mudanur<sup>4</sup>, Vaishnavi Malji<sup>5</sup>

<sup>1</sup>Associate Professor in OBG, BLDE(DU) Shri BM Patil Medical College, Hospital and Research Center, Vijayapura, Karnataka, India

<sup>2</sup>Associate Professor in GENERAL SURGERY, BLDE(DU) Shri BM Patil Medical College, Hospital and Research Center,  
Vijayapura, Karnataka, India

<sup>3</sup>Professor in OBG, BLDE(DU) Shri BM Patil Medical College, Hospital and Research Center, Vijayapura, Karnataka, India

<sup>4</sup>Professor OBG, BLDE(DU) Shri BM Patil Medical College, Hospital and Research Center, Vijayapura, Karnataka, India

<sup>5</sup>Post Graduate in OBG, BLDE(DU) Shri BM Patil Medical College, Hospital and Research Center, Vijayapura, Karnataka, India

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### Abstract

Pelvic organ prolapse is a common gynecological problem in developing countries, but pelvic organ prolapse occurrence in pregnancy is a rare phenomenon. We present a case series of pelvic organ prolapse during pregnancy. All four cases were treated conservatively. Half of the patients had cesarean sections and the other half delivered vaginally. One of the cases of cesarean section was done in view of cervical dystocia. Of the four cases, half presented with early rupture of membranes. There was one patient who delivered prematurely at 36 weeks of gestation. The postnatal period was uneventful and the prolapse regressed in all patients spontaneously.

**Keywords:** Pregnancy, Prolapse, pessary

### Introduction

Pelvic organ prolapse is a common gynecological problem in developing countries, but pelvic organ prolapse in pregnancy is a rare phenomenon. Uterine prolapse is the descent of one or more of the pelvic organs (including the bladder, uterus, small bowel and rectum) from their normal fixed anatomical position into the vaginal canal<sup>1</sup>. The mean prevalence is 19.7% [range 3.4-56.4%]<sup>2</sup>.

Pelvic organ prolapse during pregnancy is very rare with an estimated incidence of 1 per 10,000-

15,000 deliveries<sup>3</sup>. Its association with pregnancy is rare and can lead to obstetric complications. These can arise in the antepartum, intrapartum or postpartum periods of pregnancy. Antenatal complications can range from minor cervical infection to spontaneous abortion, and even preterm labor<sup>4</sup>. Intrapartum complications include problems with cervical dilatation, presence of ulcerations or lacerations over the cervix and prolonged labor, obstructed labor, uterine rupture and even death<sup>3</sup>. In most cases spontaneous vaginal delivery occurs but some situations may require emergency intervention

**Corresponding Author:** Rajasri G Yaliwal

Professor in OBG

BLDE(DU) Shri BM Patil Medical College, Hospital and Research Center, Vijayapura, Karnataka, India

Email: [ryaliwal@bldedu.ac.in](mailto:ryaliwal@bldedu.ac.in)

Mobile No: +91 98451 52240

with cesarean delivery. Preexisting POP usually resolves spontaneously during the second trimester of pregnancy, whereas prolapse occurring during pregnancy usually presents during second trimester and can worsen progressively if left unattended<sup>5</sup>. We hereby report four cases of pelvic organ prolapse (POP) during pregnancy.

### Case 1

A 28-year-old gravida 3 para 2 living 1 death 1 with a body mass index (BMI) of 18.10kg/m<sup>2</sup> visited the hospital during 10 weeks of pregnancy with a prolapsed uterus on 4<sup>th</sup> of February 2018. Pelvic examination revealed a stage 3 (by POP Q classification) pelvic organ prolapse. Standing or walking increased the prolapse while bed rest resolved it. Hospitalization was advised for the patient but she refused and wanted to manage conservatively at home. Her previous pregnancy history consisted of a stillbirth female baby that was born at 34 weeks in 2016, puerperium period was uneventful and two days later she was discharged in good health. She had her second vaginal delivery after nine hours of labor at 38 weeks of gestation in 2017. A 2800gms live baby boy was delivered with Apgar score of 10/10. No history of pelvic trauma or prolapse was present in either of the two previous pregnancies. The women continued to take her antenatal care at our institute. She presented at 39 weeks 6 days of gestation spontaneous labor pains and a history of early rupture of membranes. On pelvic examination, the prolapsed uterus was pink in color, edematous, showed ulceration and keratinization along the posterior lip of the cervix. Due to prolonged labor and non-reassuring fetal heart rate, a decision was made for emergency cesarean delivery and a live baby girl with birth weight of 3160 grams was delivered. Post operatively; the lesions and edematous tissue were treated with daily dressings of magnesium sulfate and glycerin packs. The prolapsed uterus was manually repositionable inside the pelvic cavity by one week and completely resolved by a month.

### Case 2

A 34-year-old gravida 3 para 2 living 2 with a body mass index (BMI) of 21.20 kg/m<sup>2</sup>, noticed a mass, protruding from the vagina in the 15<sup>th</sup> week of her pregnancy in 2015. Her previous two deliveries were uncomplicated spontaneous full-term vaginal

deliveries, one in 2010 and the other in 2013. Both babies weighed over three kgs and there was no past history of pelvic trauma, stress incontinence, or prolapse during or following the pregnancies. Patient complained of a mass being felt on movement but not at rest. She visited the hospital in her 16<sup>th</sup> week of gestation in 2015 with complaints of worsening discomfort associated with the uterine prolapse. Pelvic examination revealed a stage 3 uterine prolapse (POP-Q classification) with minimal edema and no signs of ulcerations. After manual repositioning of the prolapse, a no. 5 ring pessary in size of 7 x 7 cm was placed behind the cervix into the posterior fornix and it was periodically replaced. The pessary was removed at 39<sup>th</sup> week of pregnancy following spontaneous rupture of membranes. She delivered vaginally, a live healthy baby boy of 2860 kgs birth weight with an Apgar score of 10/10 on 25<sup>th</sup> of September 2015. At the time of discharge three days after delivery, the patient's uterine prolapse was completely resolved.

### Case 3

A 30-year-old gravida 2 para 1 living 1 with body mass index (BMI) of 22.36 kg/m<sup>2</sup> presented to our institute at 18 weeks of gestation with complaints of a mass descending out from the vagina since the last five days. Her first pregnancy had prolonged second stage of labor and required the use of forceps to deliver a 3450 kgs baby boy. There was no previous history of pelvic organ prolapse prior to or after her first delivery. On examination a uterine prolapse was noted, cervix was extended about four centimeters beyond the hymen (POP-Q stage 3). Cervix showed signs of moderate congestion with no ulceration. Patient was admitted and managed conservatively with daily dressings with magnesium sulphate to reduce the congestion and prolapse was managed with insertion of an appropriately sized vaginal pessary. After congestion was reduced patient was discharged and presented to hospital again at 37 weeks + 2 days with symptoms of labor. She delivered a live healthy female baby of birth weight 3104 grams on 15<sup>th</sup> of March. Intrapartum and postpartum periods were uneventful. One month follow up after delivery showed reduction in size of the prolapse to stage 1 (POP-Q classification) which was managed conservatively with daily Kegel's exercises. On a three-month postpartum follow-up prolapse had completely resolved and she did not require further management.

## Case 4

A 27-year-old gravida 2 para 1 living 1 was admitted to our institute after going into spontaneous labor following premature rupture of membranes at 36 weeks 2 days of gestation with an irreducible uterine prolapse. Her previous pregnancy was a normal vaginal delivery at term. A healthy baby boy of birth weight 3150 grams was delivered. There was no history of prolapse, pelvic trauma and stress incontinence during or after the pregnancy. In her current pregnancy the patient did not have any antenatal visits and only complained of a lump protruding from the vaginal opening from the last two weeks.

Pelvic examination was done with patient in lithotomy position. It revealed a stage 3 uterine prolapse (POP-Q classification). No signs of ulceration or desiccations were noted. As vaginal delivery was not possible due to cervical dystocia, patient was taken up for cesarean delivery. A live female baby of birth weight 2308 grams was delivered. On postpartum day four the patient was discharged. At that time cervical prolapse had completely resolved. A follow up examination done one month after delivery confirmed that there was no recurrence of the uterine prolapse.

## Discussion

Uterine prolapse is the gradual downward displacement of the uterus into the vaginal canal due to weakening and stretching of the muscles and ligaments of the pelvic floor<sup>7</sup>. Initially the incidence was higher, but with a gradual decrease in parity and a gradual increase in cesarean sections, the incidence has reduced<sup>8</sup>.

The etiology behind prolapse in pregnancy is multifactorial. Parity, malnutrition, race, vaginal delivery, short interval between consecutive pregnancies, increased strain on the support of the uterus and normal physiological changes in pregnancy causing cervical elongation can all play a major role in causation<sup>3</sup>.

The cases that we have reported were taken from 2016 to 2020. All four cases reported were multiparous women. Literature suggests that multiparous women have a greater displacement of vaginal tissue compared to nulliparous women, and the vaginal wall muscularis is thinner and has a greater elastic fiber

content compared to that in nulliparous women<sup>8</sup>. This predisposes multiparous women to a higher incidence of uterine prolapse. In the first case, the patient had a previous history of prolonged labor. Prolonged, or difficult delivery is one of the most prominent causes in the genesis of uterine prolapse<sup>9</sup>. In the second stage of labor there is a progressive descent of the fetal head caused by strong forceful uterine contractions. These contractions increase the intrauterine pressure and when associated with further maternal bearing down, can further increase the intrauterine pressure to a level as high as 19 kPa. When this stage of labor becomes prolonged it can lead to ischemic necrosis of the pelvic tissues (including nerves and muscles) and stretch injuries that may be a risk factor for later developments of pelvic floor disorders<sup>10</sup>.

None of the patients in this case series had symptoms of urinary incontinence. All four cases presented with features of pelvic heaviness and mass sensation of per vaginam. Most cases present in the third trimester with an acute onset of symptoms that disappear after delivery. In other case reports, the main symptoms that the patients presented with were pelvic heaviness, lower backache, and urinary tract symptoms such as the inability to pass urine or increased urinary urgency<sup>9</sup>.

In our case series, two patients who presented with vaginal prolapse in the second trimester were treated with vaginal ring pessary. For uterine prolapse, treatment options are very limited but most cases are best managed when they present early on in the antenatal period as in two of our cases. Conservative management of antenatal uterine cervical prolapse is consisting of genital hygiene and bed rest in a slight Trendelenburg position<sup>11</sup>. As surgical management is not feasible in pregnancy, a vaginal pessary can be an alternate option. These devices are usually made of silicone and come in a variety of shapes and sizes. They are inserted in the vagina to prevent the uterus from prolapsing out of the vagina. As long as they are properly fitted using the correct size, cleaned and replaced at least every three to six months, most of the complications associated with pessaries can be avoided. These complications include vaginal discharge, bleeding, erosion, pain and constipation<sup>12</sup>.

During the time of delivery, most cases of uterine prolapse do not inhibit the patient from vaginal delivery. Two of the four cases reported delivered vaginally without any complications in the intrapartum or postpartum periods. The two cases

where emergency section was required were due to prolonged labor, fetal distress, and the presence of cervical dystocia. Cervical dystocia is one of the dreaded complications of prolapsed uterus during labor, with a high rate of maternal and fetal morbidity and mortality<sup>13</sup>. This can occur due to the inability to maintain appropriate cervical dilatation due to a prolapse<sup>14</sup>.

## Conclusion

Pelvic organ prolapse in pregnancy, although rare, can affect the quality of life for a pregnant women. Understanding the etiology and focusing on conservative management during the antenatal period of pregnancy can help alleviate the symptoms and reduce complications associated with prolapse in pregnancy. Ultimately, when properly managed these patients can undergo a normal, uncomplicated, spontaneous vaginal delivery with an outcome of a healthy baby.

**Ethical clearance** - Ethical committee BLDE university, Shri B M Patil Medical college Hospital, Research centre

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