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Case Report

Descend of the womb: a case report and review of literature of pregnancy with uterine prolapse, delivered vaginally using Duhrssen's incision

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ABSTRACT

Pregnancy with prolapse is a rare condition associated with high risk of obstructed labour leading to significant maternal and perinatal comorbidities. Duhrssen's incision is a simple procedure which can be used for immediate delivery of the fetus when there is an entrapped head and it can reduce the need for caesarean section in such cases, thus decreasing the complications of a major surgery. We report a case of a multigravida in her 30's with stage 3 pelvic organ prolapse successfully delivered vaginally using the Duhrssen's incision. In this case, the patient presented in labor room with threatened preterm labor at 33 weeks of gestation. Conservative management was done. However, she went into spontaneous preterm labor at 35 weeks. As per patient's preference and after clinical evaluation the decision for vaginal delivery was taken. At cervical dilatation of 6 cm and 50% effacement, cervix was lying outside the vulva with fetal head entrapped. Duhrssen's incision was given at 2 o'clock and 10 o'clock position. A vigorous, 2705 grams, male baby was delivered. The incision was sutured using 2-o vicryl. Patient resumed the use of ring pessary at 6 weeks post-partum. It emphasizes on the practicality of a simple procedure which can decrease the need of cesearean section in such a high-risk case where the mother is keen and willing for a vaginal delivery.

Keywords: Uterine prolapse, Pregnancy with prolapse, Duhrssen's incision

INTRODUCTION

Pregnancy with prolapse is a rare condition with an incidence of one in 10,000-15,000 deliveries in the world, but in India it is as high as one per 547 deliveries.[1] Due to risk of inadequate cervical dilatation, cervical laceration, obstructed labor and fetal death, caesarean section appears to be a safer option for delivery but has its own problems.[2] Duhrssen's incision is a simple procedure which can be used for immediate delivery of the fetus when there is an entrapped head and it can reduce the need for caesarean section in such cases, thus decreasing the complications of a major surgery.[3] We report a case of successful vaginal delivery after giving the Duhrssen's incision in a prolapsed uterus.

CASE REPORT

A multigravida in her late 30's, known case of stage three pelvic organ prolapse with ring pessary in situ for eight years, presented in emergency with threatened preterm labor at 33 weeks of gestation. She had a previous normal vaginal delivery, at home, ten years back, following which she resumed her household activities within a week of post-partum period and had developed pelvic organ prolapse two years later. It gradually progressed from stage 1 to stage three over three years and she started using a number three ring pessary for the same. On examination, vitals were stable. Per abdomen, fundal height corresponding to 32 weeks period of gestation, mild contractions were present, cephalic presentation with head

5/5 palpable with fetal heart rate of 146/minute. Per speculum, os closed with ring pessary in situ, no leaking or discharge seen. Ring pessary was removed. Patient kept on conservative management. Tablet Nifedepine 10 mg QID was given for tocolysis and steroid cover given. The patient went into spontaneous preterm labor at 35 weeks period of gestation. Per abdomen, fundal height was corresponding to 34 weeks, moderate contractions were present and fetal head was 3/5th palpable with reactive cardiotocography. Per vaginal, cervical OS 2 cm, 30% effaced, vertex at -1, membranes present.

Due to effective uterine contractions, and also the patient's preference, the decision for vaginal delivery was taken. The labour progressed well and uterus remained intra-abdominal. However, after 6 hours, at cervical dilatation of six cm and effacement of 50%, the cervix was lying outside the vulva with the fetal head entrapped and membranes absent as shown in Figure 1.

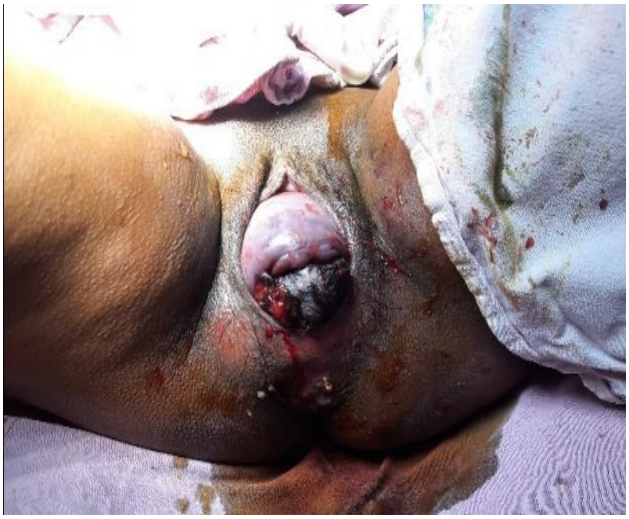

Figure 1: Cervix (oedematous) lying outside the vulva with the fetal head entrapped.

Patient was shifted to the delivery table. Under proper vigilance and strict aseptic condition, when the cervix was stretched and thinned out with vertex well applied, Duhrssen's incision was given at 2 o'clock and 10 o'clock position as shown in Figure 2.

A vigorous, 2705 grams, male baby was delivered and handed over to pediatrician. The incision was sutured using 2-0 vicryl suture and hemostasis ensured.

Immediate post-partum period was uneventful. Patient resumed the use of ring pessary at six weeks post-partum and chose barrier method of contraception. She is under regular follow up on OPD basis. She is currently willing to continue with the ring pessary and does not want any further surgical management for stage three utero-vaginal prolapse as she feels satisfied in her day-to-day activities. However, option of vaginal hysterectomy for future has been explained to the patient.

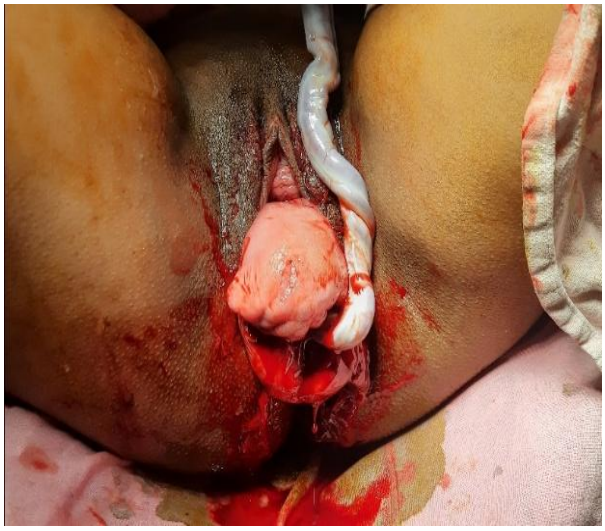

Figure 2: Duhrssen's incision given at 2 o'clock and 10 o'clock position (Photo taken after the delivery of the fetus with placenta and cord *in situ*).

DISCUSSION

Uterine prolapse can dramatically affect the quality of life by causing problems such as difficulty in walking, sitting, lifting, squatting and sexual discomfort. Multiple vaginal deliveries, malnutrition, white race, short interval between consecutive pregnancies, prolonged straining on the support of the uterus and previous history of prolapse are among the most common risk factors.[2] The incidence of uterine prolapse is high in India due to several reasons like one-fourth deliveries being conducted by untrained birth attendants. The trend of bearing more than two children further increases the risk of prolapse due to malnutrition, decreased interval in between consecutive pregnancies and repeated wear and tears on supports of the uterus. According to the pelvic organ support study, each vaginal delivery increases the risk of prolapse by 1.2-fold due to the physiological increase of progesterone and cortisol, which results in softening and stretching of the pelvic tissues, as well as to the physiologic changes of pregnancy in terms of cervical elongation and hypertrophy.[2] Prolapse that existed before the onset of pregnancy usually resolves spontaneously by the end of the second trimester without further complications, while prolapse that develops during pregnancy is usually first noted in the third trimester.

The main antepartum complication in pregnant women with prolapse is preterm labor. Cervical oedema due to stasis, venous obstruction and the impaired arterial blood flow with subsequent anoxia may be the cause of the high incidence of abortion, upto 15%, among these women.[1,2]

The oedematous protruding cervix is susceptible to mechanical trauma, which could further cause its ulceration and infection. The main intrapartum complications include inability to attain adequate cervical dilatation, a high rate of cervical laceration and obstructive labor.[2]

Good genital hygiene is imperative and local antiseptics should be applied in the event of ulcerations or infected cervix. Continuous use of a pessary is recommended, which should not be removed until the onset of labor as reduction of the prolapsed uterus protects the cervix from local trauma and prevents the possibility of incarceration.[1]

Labor induction with misoprostol and oxytocin should be avoided. Manual uterine fundal pressure to increase expulsive efforts in labor might worsen uterine prolapse and associated problems, i.e. edema, obstructed labor. Similar cases have been previously reported, each with a different line of management as summarized in Table 1.

Table 1: Case reports of pregnancy with uterine prolapse.

Study	Case	Delivery outcome
Meydanli et al (2006)[4]	30 yrs, gravida 6 parity 5 with stage 3 pelvic organ prolapse at 35 weeks with preterm labour.	A classical caesarean section was performed after 6 hours due to cervical dystocia. Patient had requested for sterilization and also gave consent for hysterectomy. A cesarean hysterectomy was performed and the vaginal cuff was suspended to the periosteum overlying the sacral promontory. It might be a therapeutic option for women who have completed their families in countries where access to healthcare is limited.
Daskalakis et al (2007)[5]	25 yrs gravida 4, parity 3 at 21 weeks with 2nd degree pelvic organ prolapse since 12 weeks period of gestation which progressed to 3rd degree at the time of presentation.	An elective caesarean section due to maternal request was performed at 39 weeks of gestation.
Eddib et al (2010)[6]	44 yrs, gravida 5 parity 4, known case of procidentia with unplanned pregnancy.	Uncomplicated vaginal delivery and vaginal hysterectomy, anterior-posterior repair and a sacrospinous ligament fixation a few months later.
Verma et al (2017)[7]	28 yrs, gravida 2 parity 1 presented in active labour with third degree uterovaginal prolapse	Complicated by entrapment of fetal head by dystocia of cervix and fetal distress. Prompt delivery was conducted by giving Duhrssen's incision on the oedematous prolapsed cervix
Chakraborty et al (2021)[1]	23 yrs, gravida 3 parity 2 presented at term with uterine prolapse which occurred a few hours before the onset of labour.	Duhrssen's incision at 2 o'clock position was given, and the baby delivered successfully.

Duhrssen described an incision over cervix in 1890. In cases with cervical dystocia, incision of the cervix (Duhrssen's incisions) was formerly applied in one fourth of the cases. Before undertaking this operation, one must be sure that the presenting part is well below the level of ischial spines, the cervix taken up, preferably thinned out and more than 5 cm dilated and there is failure of progress of labour after rupture of the membranes. Duhrssen's incisions are 2 surgical incisions of an incompletely dilated cervix, corresponding roughly to 2 and 10 o'clock position used as a means of effecting immediate delivery of the fetus when there is an entrapped head.[3] Infrequently, an additional incision is required at 6 o'clock or less commonly, incision may be given at 4, 8 and 12 o'clock position, thus avoiding the major blood supply. There is seldom excessive bleeding from this operation. Care must be taken so that the incisions do not extend beyond cervico-vaginal junction. Many of the present-day obstetricians would consider this operation dangerous and obsolete, because of the risk of uncontrollable haemorrhage from extension of the cervical incisions. But it appears from this case that it may still be necessary in some cases and is not that hazardous, provided one is aware of its scope and limitations. Indeed, it is a simple and easy operation in selected cases. Duhrssen's incision can be used as a convenient procedure to minimize the complications during labour as well as decrease the need for unnecessary caesarean section, thus, decreasing the comorbidities of a major surgery.

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