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Case Report

Rupture of Unscarred Uterus in Primigravida after Induction of Labour with Misoprostol - A Rare Complication

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ABSTRACT

The gold standard for induction protocols in high resource setting is cervical ripening with vaginal prostaglandins after that if required induction or augmentation via intravenous oxytocin with or without artificial rupture of membrane. Here we report a case of 24yrs, old primigravida lady, full term pregnancy with intrauterine fetal demise and suspected rupture uterus. She had history of induction of labour with 25 microgram misoprostol vaginally 4 hourly. Her pregnancy was uncomplicated and she had unscarred uterus prior to this incidence. On the basis of clinical suspicion about rupture of uterus and massive hemoperitoneum, laparotomy followed by repair of rupture uterus was done under general anaesthesia. Though the misoprostol is well established for induction of labour but its use should be restricted to higher centre where proper monitoring with trained staff is possible.

Keywords: Misoprostol, Rupture of uterus, hemoperitoneum.

INTRODUCTION

Induction of labour with misoprostol now has been well established. Evidence based safe and effective doses of misoprostol is also well documented. Use of misoprostol has been approved by US Federal Drug Administration and it is included in WHO essential drug list. This method is good in low resource setting because misoprostol is inexpensive and temperature stable. [1] Misoprostol is a prostaglandin E1 analog and very effective uterotonic drug. [2]

CASE PRESENTATION

Here we report a case of 24yrs old primigravida lady, referred to our OPD with chief complaints of sudden severe pain in abdomen, following amenorrhea of 9 months with shock. She had history of labour pains after the induction of labour. Induction was done with misoprostol 25mcg, vaginally, at 4 hourly intervals as per her records but total dose was not mentioned in referral paper. She experienced severe abdominal pain and syncopal attack, so she was referred here in view of hyperstimulation /suspected rupture uterus and she reached here after 6 hours of journey. Her Pregnancy was uncomplicated and supervised by Private Doctor and during labour there was no history of fundal pressure or additional drug for augmentation of labour was given. As she was a primigravida with unscarred uterus and induction was tried with recommend doses of misoprostol, so diagnostic dilemma was still present.

On general examination, pulse rate was 120 beats / min, BP was 80/60 mm Hg and she was disoriented at the time of admission.

On per abdominal examination exact uterine contour could not be made out, approximate fundal height was 32 to 34 weeks of gestation with fetal head above the pelvic brim. Uterine tone was increased. Fetal parts were felt superficially. On local examination, perineum, vulva and vagina were edematous.

On per vaginal examination cervical os was fully dilated and fully effaced. Presenting part high up with absent membrane and pelvis was adequate.

Investigation revealed, Hb 5.0 gm/dl, viral markers for hepatitis B, hepatitis C and HIV were negative, coagulation profile was normal, transabdominal ultra sonography revealed single dead fetus of 38 weeks gestation in longitudinal lies with head over the public symphysis and loss of uterine out line with collection of fluid in pouch of douglas and paracolic gutter.

As per history, clinical symptoms, sign and ultra sonographic finding a strong suspicion of hyper stimulation of uterus followed by rupture of uterus was arose.

After resuscitation, laparotomy followed by repair of rupture uterus was done under general anaesthesia. Dead male fetus weighing 2.6 kg was delivered.

Drainage of hemoperitoneum was done. Peroperative, uterine rupture was present on anterior and right lateral aspect of lower uterine segment. (Figure 1) Hemoperitoneum of about 2liter was present with fetus lying within the abdominal cavity.

Uterus was badly torn and tissue was necrosis due to lack of healthy tissue repair of rupture uterus was done with very difficulty. (Figure 2) Three unit fresh packed red blood cells were transfused. She was shifted to intensive care unit for 48 hours where strict monitoring was done. Stitches and folly catheter was removed on 7th post operative day, she was discharged on 8th postoperative day in good condition.

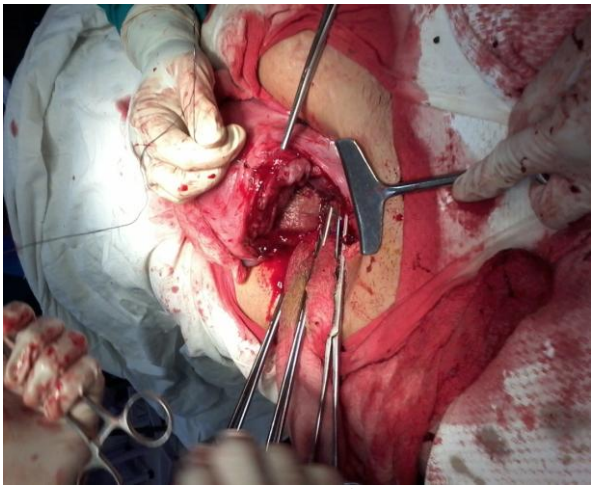

Figure 1: Rupture uterus with loss of tissue on right anterior and lateral aspects of lower segment of uterus

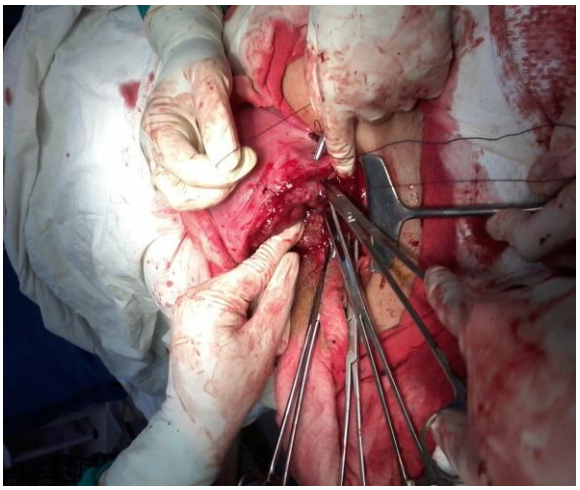

Figure 2: Repair of rupture uterus

DISCUSSION

The efficacy and safety of misoprostol at low doses for cervical ripening and induction of labour was established through various studies. [3,4 -9]

Dosage guideline for misoprostol according to Cochrane meta-analysis for induction of labour after 24 weeks of gestation is 25 mcg, vaginally every four hours or 50mcg orally every four hours until delivery or maximum up to 200 mcg is recommended. [5-10] Side effects of misoprostol are painful labour and uterine hyperstimulation.

Misoprostol is generally contraindicated in previous caesarean section because of increase chances of scar

dehiscence. [11,12] Scar dehiscence is also reported in grand multipara. The US Food and Drug Administration has listed various side effect like, hyperstimulation, uterine tetany, uterine rupture, maternal shock and death, fetal bradycardia, meconium-stained liquor and fetal death. [13]

In our case though mother survived but uterine rupture in primigravida in unscarred uterus with intrauterine fetal demise and massive hemoperitoneum was present. Uterine rupture was very bad and repair was very difficult. For survival mother was shifted to ICU &she needs ionotropic support and blood transfusion.

Till date four cases of rupture uterus in unscarred uterus were reported after induction with either 25 mcg misoprostol or after the use of 50 mcg misoprostol

Vaginally every four hours, but all these women were multigravida. In year 1999 one case & in 2000 two cases were reported, both were multigravida with unscarred uterus received 50 mcg misoprostol vaginally every four hours, all women suffered with rupture uterus. [14] Another case was published in 2011; a grand multigravida of 26 weeks pregnancy with intra uterine fetal demise, termination of pregnancy was tried with 400 mcg intravaginal misoprostol and repeated every four hours. After six doses she had rupture uterus. [15] Recently in August 2014 one case of rupture uterus was published with single dose of 25 mcg misoprostol followed by low dose oxytocin. [16] In our case exact total dose was not mentioned, but induction was done with misoprostol and after 12 hours, she was referred and after six hours of journey she reached to tertiary care center, she lost her baby and she faced lots of physical, mental and psychological trauma as well.

According to various studies misoprostol is more prone for uterine hyperstimulation, fetal distress and rupture uterus as compared to other uterotonics. [17] Though the recommended dose of misoprostol is 25 mcg, vaginaly every four hourly as per Cochrane review, [18] but if monitoring of labour was not good then the detection of these complications might be delayed as happened in our case.

Well trained paramedical staff is required to recognize hyper stimulation and fetal distress in early stages so we can avoid this type of devastating complication.

This would also help us in reduction of maternal and neonatal morbidity and mortality.

CONCLUSION

Thus we can say in spite of well recommendation of misoprostol it should be used carefully and doses should be well calculated. Though it is recommended for low resource settings but in my opinion it should be used only in those places where well equipped facilities for emergency caesarean section and neonatal intensive care units are available.

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