

Management of Midtrimester Missed abortion by Mifepristone and Transcervical Foley catheter with previous Three Caesarean section-A case report

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Abstract: To share our experience about the safety and efficacy of mifepristone and Transcervical Foley Catheter in midtrimester missed abortion with uterine scar due to previous history of three caesarean section. This patient was diagnosed initially as a case of partial mole of 16 weeks pregnancy. After termination missed abortion was diagnosed by histopathological and serum β hCG report. Medical termination with scared uterus carries grave risk of mother due to rupture of uterus. Initially her cervix was ripened with mifepristone and transcervical Foley catheter then evacuation was completed with oxytocin drip. Now a days its a great challenge to medical termination of midtrimester missed abortion with previous caesarean section specially when it is two or more. It's our goal to report this case as a special entity in increasing awareness about medical termination of midtrimester missed abortion with previous 3 caesarean section with great precaution.

Key words: Missed abortion, Previous three caesarean section, Mifepristone, Transcervical Foley catheter. ----

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I. Introduction

A missed abortion occurs when a fetus dies, but the body does not recognize the pregnancy loss or expel the pregnancy tissue.¹ Ultrasonography is the only tool to confirm the diagnosis, sometimes missed abortion can be confused with molar tissue.² However pregnancy loss is associated with serious social and psychological implication to the mother. It is therefore crucial that women suffering from miscarriage are treated compassionately and with sensitivity.³ The accepted management of miscarriage is to ensure that the products of conception are completely evacuated from the uterus as soon as possible in order to minimize blood loss and the risk of infection. With the development of the antiprogesterone- mifepristone and some new synthetic prostaglandins as a safe and effective method for termination of early pregnancy .so evaluation of such drugs for the management of miscarriage with scarred uterus is the next logical step.⁴

There are three options for management-expectant, medical and surgical. For the last two decades most of the patient with missed abortion likes medical option rather than expectant management.⁵

Oxytocin is safe and effective initiator of uterine contraction but success rate depends on the status of the cervix. There are some methods of cervical ripening- these include mechanical dilator and prostaglandin analogue. More recently transcervical Foley catheter has been used successfully in women with previous history of caesarean section.⁶ It helps to change the cervical score, which has limited effect on uterine contractions. Insertion of Foley catheter into cervical canal and inflating the balloon with distilled water causes local release of prostaglandin due to compression. Prostaglandin analogue (misoprostol) E1 has an effect both on cervical ripening and uterine contraction. Risk associated with the use of this drug includes fewer episodes of uterine hyperstimulation.⁷ A totally non-invasive method is the use of mifepristone- the most widely used antiprogesterone compound.⁸ It initiates uterine contractility, softening and dilatation of the cervix as well as expulsion of the embryo. Decision was critical when it was associated with previous caesarean section always keep in mind with great threaten for rupture of the uterus.⁹

II. Case Report

Mrs. Jannat 30 years old para 3+0, all were delivered by caesarean section, was admitted into CMCH on 28.12.15 for termination of partial mole of 16 weeks of pregnancy with previous history of three caesarean section. It was her wanted pregnancy without any preconceptional counselling, her first pregnancy was delivered by caesarean section due to obstructed labour at Chittagong Medical College Hospital, and baby was died from perinatal asphyxia, subsequently second and third pregnancy was delivered by elective caesarean section at private clinics. Both of the babies were alive. Age of her last child was 3 years. Her LMP was 30.8 2015, at 8 weeks of her pregnancy she had slight per vaginal blood stained discharged, ultrasonography of lower abdomen – shows that a single viable pregnancy of 8 weeks with small subchorionic haemorrhage and diagnosed as a case of threatened abortion and treated accordingly. At 16 weeks of pregnancy she was visited to an obstetrician for ANC. Repeat ultrasonography done at thana level on 27.11.12 reports shows that-on multiple cystic structure with large irregular saclike cloudy shape-suggestive of molar pregnancy. Second ultrasonography done by another person at same area on 5.12.15 and report was-bulky uterus with endometrial collection and endometrial mass. Differential diagnosis was partial mole. On 26.12.15 another ultrasonography from Chittagong city where shows- uterus bulky, deformed hypoechoic irregular shape structure about 16 week size gestational sac. At that time serum beta hCG was done- it was 40369 miu.

After admitted into CMCH, the patient was examined thoroughly, she was mildly anemic, BP: 120/80 mm of Hg. Per abdominal examination reveals that her fundal height was 16 weeks, and on per vaginal examination-cervix was firm tubular and posteriorly placed. Her coagulation profile was within normal range, according to her investigation she was nondiabetic and she does't have any other medical disorder.

Attempt for medical termination, she was treated with Tab. Mifepristone (200mg) 8 hourly for 48 hours. After 2days cervix was soft then transcervical Foley catheter (12 fr) was introduced followed by spontaneous expulsion of catheter and cervix was effaced and dilated about 3 cm, and carefully monitored the patient's vital sign. on 1.1.2016 spontaneous expulsion of malformed mummified foetus with part of placenta, some amount of product of conception were retained and then MVA was done under deep sedation, and tissue was send for histopathological examination. Postoperatively patient was treated with injection ceftriaxone (1gm), oxytocin drip 20 unit in 1000 cc DNS@ 20drop/minute was continued for 12 hours. Tab misoprostol 800 micro gm was given in per rectal route. On third postoperative day patient was discharged from hospital without any complication.

Her histopathological report: Sections shows degenerated chorionic villi with necrosed tissue and area of hemorrhage and few fragments of decidual change. No granuloma or malignancy is seen. Comment – product of conception. After one week serum Beta hCG report was less than 1. So, our diagnosis is a case of missed abortion of 16 weeks with previous history of three caesarean section.

III. Discussion

Abortion is a very common complication of pregnancy. In one third cases of threatened abortion turn into missed abortion,¹⁰ in our case this patient also follow this consequence.

On ultrasound scanning during the first trimester partial mole will be often resembles normal product of conception. The embryo can appear viable on early ultrasound scan but become non viable by weeks 10-12. As a result diagnosis of a partial mole can often be missed, after a miscarriage or evacuation unless the products are send for pathological review.¹¹

This is similar with my case report. Many women undergo termination of missed abortion do not have a favorable cervix, so some method of cervical ripening-pharmaceutical or mechanical-often is used¹². Pre-induction cervical ripening is often done to increase the likelihood of successful termination. So, there is a keen interest in developing safer, more cost effective and more efficient means of pre-induction cervical ripening.¹³ Various protocols have been described for termination of pregnancy¹⁴. Several studies have documented the efficacy of an abortion protocol combining of mifepristone and intravaginal prostaglandin in case of scarred uterus either due to one or two previous caesarean section¹⁵, but in our case it was previous three caesarean section. So, we think about great risk of rupture uterus and we use tab. mifepristone and transcervical Foley catheter for ripening of the cervix. Unlike other study where they use mifepristone (600mgm) as a single dose but we use 200 mg 8 hourly for 48 hours. There are so many studies have been reported about the use of prostaglandin analogues for medical termination of pregnancy (induced abortion) at more than 15 weeks as well as termination of missed abortion with scarred uterus.¹⁶

In our case we use mifepristone and transcervical catheter at 16 weeks of missed abortion. Our protocols achieved almost complete expulsion with previous history of 3 caesarean section without any complication. This type of intervention is concordant with previous series who had previous history of cesarean section either one or two but no such report was find out with previous history of 3 caesarean section. Different studies shows that previous caesarean section does not contraindicated the use of misoprostol in previous history

of caesarean section either one or two¹⁷. However, caution is required due to the higher risk of uterine rupture regardless of gestational age. While the incidence of uterine rupture in another study was also seen though the incidence with one true rupture and one wall dehiscence is found in scarred uterus with the mean dose of misoprostol¹⁸. In most previous studies, abortion after 12 weeks' gestation has been carried out using medical rather than surgical procedures because to reduce the maternal morbidity and mortality¹⁹. However, comparison of our case with those published elsewhere is difficult because protocols have varied widely with regard to mode of, type and dosage. Our protocol differs from routine practice. Many investigators have used PGE2 gel or oxytocin to perform abortion in patients with scarred uterus. Debby and others using in a series of extra-amniotic perfusion of PGE2 for abortion between 16 and 27 weeks' gestation and observed no case of uterine rupture in 606 women.²¹ Chapman et al. reported a uterine rupture rate of 3.8% in association with administration of misoprostol.²² with this view we use another drug other than misoprostol in our case we use mifepristone which acts primarily as antiprogesterone agent. Both progesterone and mifepristone form hormone-responsive element receptor complexes²³. The agonistic activity of this progestin antagonist is due to its ability to activate certain transcription activation function on the progesterone receptor which is the principal factor in its anti-progesterone action. There are three major characteristics of its action that are important, a long half-life, high affinity for the progesterone receptor, and active metabolites.

It is likely that abortion with mifepristone as a result of multiple actions. Although mifepristone doesn't induce, labour, it does open and soften cervix (this may be action secondary to endogenous prostaglandins). Other action is blockade of progesterone receptors in endometrium. This leads to disruption of the embryo and production of prostaglandins, and perhaps a direct action on trophoblast leads to decrease in human chorionic gonadotrophin and withdrawal of support from corpus luteum. In our case as it was a missed abortion so serum β hCG level and function of corpus luteum already declining.

Some few records of last seven years show that two out of 100 women with two previous caesarean sections showed rupture during medical abortion of pregnancy.²⁴ Medical termination is increasingly popular choice for women with missed abortion with previous caesarean section.

To have a realistic incidence of uterine rupture during medical abortion in women with previous caesarean section, only case reports will not help. One also needs to report the number of medical abortions done during the same period. As case reports of Goyal and Oteri indicate that second trimester abortions even when performed with mifepristone -misoprostol are safe in presence of previous caesarean section.^{20,24}

IV. Conclusion

This type of case report showing the use of mifepristone and transcervical Foley catheter for the termination of midtrimester missed abortion with previous three caesarean section. Any kinds of methods of termination may be associated with the risk of uterine rupture. However, dose of mifepristone and interval of introduction of Foley catheter should be determined very meticulously and judiciously. A large study is needed before drawing definitive conclusion about the safety of the regimens.

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Management of Midtrimester Missed abortion by Mifepristone and Transcervical Foley catheter ..

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