Case Report

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Uterine Rupture During Medical Induction for Second Trimester Abortion

Rekha Poudel,[1] Ganesh Dangal,[1] Aruna Karki,[1] Hema Pradhan,[1] Ranjana Shrestha,[1] Kabin Bhattachan,[1] Nishma Bajracharya,[1] Kenusha Tiwari,[1] Sonu Bharati[1]

[1]Department of Obstetrics and Gynecology, Kathmandu Model Hospital, Nepal.

ABSTRACT

Medical induction is an alternative to dilatation and evacuation (D & E) in second trimester abortion, though it has higher risk of minor complications compared to D & E. Combination of mifepristone and misoprostol is commonly used for the medical abortion. A 32 years G3P2L2 with previous two cesarean delivery was referred to our center at sixteen weeks of gestation for termination of her pregnancy. After 63 doses of misoprostol, she had to undergo unintended major intra-abdominal surgery for partial uterine rupture.

Keywords: Dilatation and evacuation; medical induction; second trimester abortion; uterine rupture.

INTRODUCTION

Second trimester induction with a combined regimen with mifepristone and misoprostol is an appropriate alternative to dilation and evacuation (D&E), although the presence of a uterine scar potentially increases risks.[1] Incidence of major complications from mifepristone and misoprostol medical abortion at or after 13 weeks gestation is low, although minor complications are more frequent than for D and E.[2]

This particular case is being reported for non-response with more than 60 doses of misoprostol and occurrence of unusual severe adverse event in the form of ruptured uterus.

CASE REPORT

A 32 years G3P2L2 with two previous cesarean delivery (first 8 years and last born five years back) came to our OPD at 16 weeks of gestation for termination of her pregnancy. She was counselled and planned for medical induction for her mental health issues. She had no significant past medical-surgical illness. On examination, fundal height was 16-week size, which was confirmed by obstetric scan.

She received mifepristone 200 mg orally on day one. After 36 hours, she was started with misoprostol 400 mcg orally three hourly with analgesics intermittently for pain management. She received 23 doses of misoprostol without notable cervical change and was diagnosed with a failed induction. She was discharged to home for an extended 'drug holiday' in hopes she would respond at her next admission. She returned in one week for readmission. Due to family problems and national holidays and lack of response to induction medications, she was discharged again (after 11 dose) and readmitted one more time (total three admissions). It was not possible to switch over to D & E as there was no cervical response.

At each admission, a physical examination and USG was done to rule out any abnormality like uterine rupture. She was always under close observation and she never complained of any abdominal cramps. During her third admission, mifepristone 200 mg was given one more time on day one and this time, different lot of misoprostol was started to see for change in response. After receiving an overall cumulative total of 63 doses of misoprostol, she complained of severe pain abdomen with mild bleeding per vagina and passage of small clots. She was hemodynamically stable but on examination, there was tenderness over previous scar site. USG showed a live fetus with no abnormal findings as such. Emergency laparotomy was done in view of suspicious rupture of uterus (due to patient's symptoms and her examination findings).

Operative findings revealed dense adhesion of anterior abdominal wall with uterus, partial rupture of uterus with normal bilateral tubes and ovaries, with placenta accreta in lower uterine segment. Due to atony causing around 2000 ml intraoperative blood loss, subtotal

Correspondence: Dr Rekha Poudel, Department of Obstetrics and Gynecology, Kathmandu Model Hospital, Nepal, Email: drrekhapoudel@gmail.com, Phone: +9779803721075.

hysterectomy with bilateral salpingectomy with primary urinary bladder repair was done. Three pints of whole blood was transfused. On fourth postoperative day, patient was discharged with Foley's catheter in situ, which was removed after two weeks. She is dry and continent since then.

This severe adverse event (SAE) was an unintended intra-abdominal surgery for partial uterine rupture (rupture of previous cesarean scar), which was reported and reviewed with Ipas team and trainers' network.

All serious adverse events are reported and reviewed via an adverse event review program supported by Ipas Nepal (international NGO) in conjunction with the Ministry of Health and The Nepal Second Trimester Abortion Trainers Network. This program has helped to establish a safety culture in which we report and discuss adverse events using a 'no blame' approach and identify potential lessons learned in order to improve future care.

DISCUSSION

Globally, 10-15% of induced abortions have taken place in second trimester and it disproportionately contribute for maternal morbidity and mortality.[2] For medical abortion at or after 13 weeks gestation, a combined regimen with mifepristone and misoprostol is safe and effective, with fetal expulsion rates of over 90% at 24 hours, median induction-to-abortion time of 6-10 hours and major complication rates of less than 1%.[3] When misoprostol is continued until expulsion with no cut off time, 99% of women have a successful abortion.[3]

Blum et al[4] in their study on medical abortion at 13-18 weeks of gestation found that an outpatient day process for medication abortion is safe, effective and feasible. Approximately, nine of ten (n=206, 89.6%) achieved a successful abortion without transfer to overnight care and three women experienced an SAE. However, it did not define the maximum dose of misoprostol that can be given.

In a systematic review [5] of medical abortion in second trimester using misoprostol, the risk of uterine rupture in prior cesarean delivery was 0.28%, while in women without prior cesarean delivery it was only 0.04%.

WHO guideline (2018) recommends the use of mifepristone followed by misoprostol (400 mcg three hourly till expulsion), but leaves upon clinical judgement of health-care providers to decide the number of maximum doses. Safe abortion guideline (2012) had recommended a maximum number of five doses.[6]

CONCLUSIONS

Second trimester abortion when indicated should be conducted in a center with safe abortion service, with a client being under close observation of a vigilant team to identify any SAE and take prompt action to prevent maternal morbidity and mortality. However, need of consensus or guidance regarding number of doses and timely hysterotomy should be addressed.

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