CASE REPORT

RUPTURE OF A PREVIOUSLY SCARRED UTERUS DURING SECOND TRIMESTER MISOPROSTOL-INDUCED LABOUR FOR A MISSED ABORTION: A case report.

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SUMMARY:

Misoprostol is useful in ripening the cervix prior to mid-trimester termination of pregnancy. It is particularly indicated in cases of missed abortions whether the uterus is scarred or not. The procedure is safe in the majority of cases.
We present a case of uterine rupture during induction of labour with vaginal misoprostol for a missed abortion at 23 weeks gestation in a woman with one previous lower segment caesarean scar. We decided to present this case in order to alert practitioners that although the practice is safe in the majority of cases, there are risks of uterine rupture.

KEY WORDS: Previous scarred uterus - Second trimester missed abortion - Intravaginal Misoprostol - Induced labour -Uterine rupture.

RUPTURE D'UN UTERUS CICATRICIEL PENDANT L' INDUCTION DE TRAVAIL AVEC MISOPROSTOL PAR VOIE INTRA VAGINALE INDIQUER POUR GROSSESSE ARRETEE AU DEUXIEME TRIMESTRE: Cas clinique.

RESUME:

Le misoprostol est un médicament très pratique pour la préparation du col utérin avant une induction du travail au deuxième trimestre en cas de grossesse arrêtée, que l'utérus soit cicatrisé ou non. C'est une procédure qui est généralement sans danger dans la majorité des cas. Nous présentons ici un cas d'une rupture utérine pendant une induction de travail pour grossesse arrêtée à 23 semaines d'aménorrhée chez une femme avec un antécédent de césarienne segmentaire transversale basse. Notre but est d'attirer l'attention de praticiens sur les risques de rupture utérine associés, bien que dans la majorité des cas, cette procédure se déroule sans aucun incident.

MOTS CLES: Utérus cicatriciel - Grossesses arrêtées - Induction du travail - Misoprostol par voie intra vaginale - Rupture utérine.

I - INTRODUCTION

Uterine rupture is a serious and often fatal condition for both the mother and foetus. In general, the incidence may vary from 1 in 1280 deliveries to 1 in 18500 deliveries [1] and more than 90% are associated with prior caesarean section [2]. It occurs at a frequency of approximately 1% of pregnancies with previous uterine scar during induction of labour with misoprostol or oxytocin [3]. Other less common causes of uterine rupture may include abortions using instruments. Silent and incomplete rupture may have occurred earlier thus predisposing the uterus to rupture during the uterotonic effects of misoprostol.

Vaginal misoprostol is more widely used in Cameroon for induction of labour at term than in the second trimester usually with no adverse effects. We report a case of uterine rupture in a patient with one previous caesarean section during cervical ripening prior to induction of labour of a missed abortion at 23 weeks gestation. We decided to present this case to draw the attention of other practitioners to the fact that uterine rupture can occur when vaginal misoprostol is used for ripening the cervix or for induction of labour in a scarred uterus during the second trimester [4].

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II- CASE REPORT

Mrs PLV, 34 years, was admitted on 04/04/98 with a diagnosis of missed abortion based on cessation of foetal movements for one week and ultrasound examination. The last menstrual period was on 03/04/98. On admission, she had an amenorrhoea of 24 weeks and ultrasound examination (03/04/98) gave a gestation of 23 weeks. Her only previous delivery in 1994 was by emergency lower segment caesarean section for cervical dystocia with an uneventful post operative period. Her contraception prior to the current pregnancy was the combined pill.

On admission, she was generally well. She weighed 78 kg. The fundal height was 23 cm and there were no foetal heart sounds on auscultation. The Bishop score on vaginal examination was 2/10, and a repeat ultrasound examination confirmed the absence of foetal heart beats. Her laboratory investigations were all within normal limits: haemoglobin 13.2 g/dl, blood group O rhesus positive, platelet count 236,000/ mm3, fibrinogen 2.9 g/l and the Prothrombin time was 13.3 s (control 13 s). 1000 ml of rhesus positive blood was cross matched.

At 19h.00 on 07/04/98, 100µg of misoprostol (Cytotec®, manufactured by SEALE Division of Monsanto, High Wycombe, England) was inserted into the posterior fornix, with instructions to repeat the dose 6 hourly until the onset of uterine contractions. By 9h.00 on 08/04/98, there were just a few weak contractions; the Bishop score was 3. At 17h.00 the contractions were moderate, lasting 30 seconds with a frequency of 3 contractions every 10 minutes. Maternal pulse and blood pressure were respectively 84 per min and 130/90 mmHg. The membranes ruptured spontaneously at 4h.00 on 09/04/98 and the liquor amnii was dark brown in colour. Thirty minutes later, the contractions suddenly stopped. The patient was noted to be bleeding per vaginam. There was supra-pubic tenderness, pulse 100 per minute and the blood pressure was 120/80 mmHg. A provisional diagnosis of uterine rupture was made and an emergency laparatomy performed shortly thereafter.

The operative findings were as follows: a transverse tear in the uterus along the line of the previous lower segment caesarean scar just above the bladder and extending into the left broad ligament; a male foetus partly within the uterine cavity and clogging the area of tear thus providing tamponade effect; haemoperitoneum estimated at 500 ml and omental adhesion to the upper edge of the tear. The bladder was intact. The tear was carefully repaired after extraction of the foetus and placenta. Both ovaries and tubes were healthy. The tubes were not ligated. An indwelling catheter was left in the bladder for 48 hours. The patient was not transfused with blood; she was managed routinely on antibiotics and analgesics. The post-operative haemoglobin was 11.5 g/dl. There were no post operative complications. All the skin sutures were removed on day 8 and she was discharged home with instructions to resume her contraception for at least one year before attempting another pregnancy.

III- DISCUSSION

Misoprostol is a synthetic prostaglandin E1 analogue which is widely used for induction of labour at term, for cervical ripening prior to mid-trimester termination of pregnancy and for termination of first trimester pregnancies [5,6]. It can be administered orally, vaginally or rectally; but there is evidence that the vaginal route is probably more effective for termination of second trimester pregnancies [7]. It has been suggested that prior treatment with mifepristone (RU-486) enhances the efficacy of vaginal misoprostol when inducing abortion in the second trimester [8]. Its main limitations are the associated risks of uterine hyper stimulation and rupture.

There have been isolated reports of rupture of the unscarred uterus during misoprostol induction of labour in the second trimester [9-11] and at term [10-13]. There have also been reports of uterine rupture during misoprostol induction at term in women with prior caesarean scar; however, most of these ruptures have usually been after multiple doses of the medication [14, 15]. Our patient had one previous lower segment caesarean section and ruptured her uterus whilst on her first dose of vaginal misoprostol.

There is still debate concerning the appropriate dose of misoprostol to be used for induction of labour. Some authors recommend that the dose of vaginal misoprostol for induction of labour at term (when the foetus is viable) should be 25µg given 4 to 6 hourly up to a maximum of 5 doses [8]. The same authors recommend that the dose of vaginal misoprostol for induction of labour in the second trimester should either be 400µg (administered 3 hourly up to a maximum of 5 doses) or 200-600µg given 12 hourly. Doses between 25 and 50µg have been proposed as safe [16]. BRIQUE et al [16], reported no complications with the use of 100µg in grand multiparous women, but uterine rupture following multiple doses of oral misoprostol 100µg in multigravid women has been reported [14]. Our patient was given 100µg. GOLDBERG et al, have proposed that since it was still not clear whether the use of misoprostol increases the frequency of uterine rupture in women attempting vaginal delivery after caesarean section, or whether the use of any drug to induce labour in a woman with unfavourable cervix increases the risk of rupture; misoprostol should not be used routinely to induce labour in women with previous uterine scar until it has been proved safe by further studies.

IV- CONCLUSION

Although the procedure is safe in the majority of cases, vaginal misoprostol at a dose of 100µg may result in uterine rupture during induction of abortion in the second trimester in the presence of one previous lower segment caesarean scar especially when the cervix is unfavorable.

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