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Effectiveness of Oral Misoprostol in Termination of Second Trimester Pregnancy with Dead Fetus in Utero

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ABSTRACT

Objective To study the effectiveness of oral misoprostol in termination of secondtrimester pregnancy with dead fetus.

Design Prospective descriptive study.

Setting Maharaj Nakorn Chiang Mai Hospital, Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University.

Subjects Twenty pregnant women, 14-28 week's gestation with dead fetus in utero and unfavourable cervix, between 1st August, 1997 and 31st July, 1998.

Intervention 400 micrograms misoprostol orally every 4 hours.

Main outcome measurement Success rate in termination of pregnancy within 24 hours (complete delivery of fetus), mean induction-delivery time in successful group, maternal side effects.

Results Success rate in termination of pregnancy within 24 hours was 90%. Mean induction-delivery time in successful group was 10.5 hours (4.5-22.7).

Conclusion Oral administration of misoprostol is convenient, inexpensive and highly effective in termination of secondtrimester pregnancy with dead fetus in utero with minimal side effects.

Key words : misoprostol, second trimester abortion, dead fetus in utero

Dead fetus in utero (DFIU) is one of the common problems in obstetric practice,especially in the second trimester. This condition may be complicated by maternal psychic problem, infection and consumptive coagulopathy.[1]

There are various techniques for termination of pregnancy in the second trimester with different advantages and disadvantages. Expectancy may not be appropriate in this situation since the abortion time may be prolonged and the patients may suffer increasingly from psychic problem and consumptive coagulopathy. Dilatation and curettage has the risk of causing cervical trauma, uterine perforation, infection and bleeding.[2] Hypertonic saline infusion into the

Case 14 failed to abort within 24 hours. The patient received 9 doses of oral misoprostol with addition of 400 micrograms intravaginal misoprostol every 4 hours for 2 doses. After favourable cervix was attained, intravenous oxytocin was given to promote adequate uterine contraction. No side effect was found and the patient could tolerate it very well. The induction-delivery time was 64.13 hours and the abortion time was 64.2 hours. No additional operative procedure was performed.

Case 16 also failed to abort within 24 hours. She was given 9 doses of oral misoprostol without intravenous oxytocin. The patient experienced fever, chill, nausea and diarrhea. Complete abortion was accomplished in this case. The induction-delivery time was 38.75 hours. The abortion time was 38.92 hours.

The mean induction delivery time and mean abortion time were only analyzed in successful group of 18 patients.

Table 2. Side effects and peripartum variables

Side Effects & Peripartal Variables	Number (%)
Fever (Temperature > 38.0 — C)	3 (15)
Chill	7 (35)
Nausea	5 (25)
Vomiting	1 (5)
Diarrhea	6 (30)
Oxytocin augmentation	2 (10)
Analgesia requirement	7 (35)
Incomplete abortion	11 (55)
Postpartum hemorrhage	0 (0)

Table 3. Time interval to abortion

Time Interval(hours)		Number (%)
Induction-delivery time	12	13 (65)
Delivery time**	24	18 (90)
Abortion time	12	13 (65)
Abortion time	24	17 (85)

** = Successful group

Discussion

The widely used method at the present time for termination of pregnancy is the administration of intravaginal prostaglandins as it has dual action of causing cervical dilatation and uterine contraction. The action of prostaglandin E2 on cervical ripening by changing in proteoglycan metabolism and composition has been previously elucidated[17]. It is believed that misoprostol, a prostaglandin E1 analog, has the same local effect like prostaglandin E2

The induction-delivery time in our study (10.5 hours) was slightly shorter than those reported by Tansatit et al[4] using condom-balloon technique (16 hours 36 minutes) and Srisomboon et al[15] using 200 micrograms of intracervico-vaginal misoprostol (15 hours).

Neto[16] reported the mean induction delivery time in termination of dead fetus in utero 19-41 weeks of gestation by oral administration of 400 micrograms misoprostol every 4 hours, was 9 hours 12 minutes and only minimal maternal side effects were found.

In our study, we set up the strict exclusion criteria and all patients were in second trimester. The mean induction-delivery time was 10.5 hours, slightly longer than that reported by Neto et al.[16] Such difference may result form cervical factors, variations in patients and different gestational age. In Neto series, 6 out of 20 cases were in the third trimester of pregnancy.Cervical Bishop scores and gestational age have influenced in the response to prostaglandins.

Side effects were found in only few cases. The most common side effect was chill followed by diarrhea. Vomiting was detected in only 1 case. Fifty five percent of patients had to undergo operative procedure to remove residual placenta. However, only small pieces were evacuated. No patient was complicated by postpartum hemorrhage.

In the failed cases (case 14 and 16) the conceptive products were expeled spontaneously by further administration of misoprostol either oral or vaginal route. Such medication can be repeated or continued provided no serious complication occurs. No postpartum hemorrhage and serious side effects were detected. No side effect was found in case 14, while case 16 developed fever, chill, nausea and diarrhea, which could be controlled by paracetamol, metoclopamide and diphenoxylate, respectively.

The induction-delivery time and the abortion time were quite different. The time from delivery of fetus to the time of complete abortion depend on various factors. Some physicians wait until spontaneous expulsion of the placenta. While others promptly manage to remove the placenta after delivery of the fetus. Placental delivery was delayed in one case of our patients.

In conclusion, oral administration of misoprostol is highly effective, convenient, and inexpensive for termination of second trimester pregnancy with dead fetus in utero.

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