Comparison of effectiveness of two vaginal Misoprostol regimens, 400 μg and 600 μg, on pregnancy termination in the 2nd trimester

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Abstract

Introduction: In a number of complications including intrauterine fetal death, premature rupture of membrane, chorioamniotitis and preeclampsia, gynecologists have to terminate the pregnancy in the 2nd trimester to save the mother's life. The methods of pregnancy termination in a uterus larger than 14 weeks in size, include spontaneous contractions, PGE_1 and PGE_2 vaginal suppositories, intravenous oxytocin injection, intra amniotic injection of $PGF_{2\alpha}$, Ethacrynic Acid, and hypertonic saline. Misoprostol, a synthetic PGE1 analogue, which was developed for the prevention of peptic ulcer disease with potent uterotonic and cervical ripening activity, is nowadays applied in the management of obstetric problems like termination of pregnancy. The goal of the present clinical trial is to compare the effectiveness, side effects, hospitalization period and the need for surgical evacuation, when 400 μg and 600 μg Misoprostol is applied to terminate a second trimester pregnancy.
Materials and Methods: One hundred women with medical indications for termination of pregnancy in the second trimester were recruited in Mirza Koochak Khan Hospital in 2002- 2003. They were randomly divided into two groups (each group with 50 cases). One group received 400 μg vaginal Misoprostol suppositories (Group A) and the other group 600 μg (Group B) every 12 hours in posterior fornix, upto a maximum total of 4 doses. For Comparison of the results in the two groups χ^2 and t- test were used.
Results: In the group A, 84%, as compared to 80% in the group B, had a complete expulsion of the product of conception. Fourteen percent in group A and 20% in group B needed curettage. The success rate of treatment (complete expulsion of pregnancy products) after 48 hours was 98% and 100% in Group A and group B, respectively. The interval between induction and expulsion of fetus was shorter in the group B (9.2±6.7 hours) than in the group A (12.2±7.7 hrs, p=0.003) and in patients with intrauterine fetal death (7.4±2.8 hrs) compared with premature rupture of membrane (11.9± 9.6 hrs, p=0.005). The placenta was expelled after the fetus with shorter interval in group A (p=0.02). There was no statistically significant difference between the two groups concerning the duration of hospitalization and maternal complications such as nausea, vomiting, diarrhoea, fever, unrelenting abdominal pain and hemoglobin drop.
Conclusion: Vaginal administration of Misoprostol is a quite safe, efficient and cost effective method for termination of pregnancy in the second trimester. In emergency situations such as chorioamniotitis and preeclampsia, 600 μg dose might be recommended for rapid expulsion of products of conception, otherwise 400 μg dose is a less costly alternative.

Key Words: Misoprastol, Second trimester, Premature Rupture of Membrane, and Intrauterine Fetal Death.

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