Original Article

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Comparison between Intracervical Misoprostol (200mcg) and EXTRA Amniotic 20% Mannitol (100ml) + Carbeprost (250 mcg) in Second Trimester Abortions Upto 20 WK

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Abstract

Objective-we aim to evaluate another safe method for second trimester abortions upto 20-wk of gestation. *Methods*: this is a prospective study of 40 patients undergoing termination of pregnancy upto 20 wk in Geetanjali medical college & Hospital. Detail history of patient was obtained and study carried out after consent of the patient. *Result*: To induce termination of pregnancy, during 11-20 weeks of gestation, extra amniotic 20% mannitol solution (100ml) + carbeprost (250) was used in 20 patients. The amount of mannitol was 100 cc through foleys catheter. Where as other 20 patients were induced with vaginal misoprostol 200 mg repeated 4-6 hrly. Mean abortion time with mannitol was 31.55 hour, with no side effects were noted. The longest induction abortion interval was 45 hours and 80% with in 30 hours and 100 % delivered with in 36 hours.

Kerywords: Intracervical Misoprostol; Mannitol; Amniotic

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Introduction

Second trimester abortions constitute 10-15% of all induced abortions worldwide, but are responsible for two third of major abortion related complications. During the last decade, medical methods for second trimester induced abortion have been considerably improved and become safe and more accessible. It is advisable that these abortions take place in a health care facility where blood transfusion and emergency facility are available. This study is the comparison between intra cervical misoprostol and intra cervical extra amniotic mannitol+carbeprost. Efforts should be made to reduce unnecessary surgical evacuation of the uterus after expulsion of fetus. This study will further help in treatment of women with failed medical induction after 24 hours and the safe method for abortions in women with previous uterine scar.

Aim & Objective

- To compare efficacy, side effect and acceptability of both drugs.
- Alternative safe drug for mid trimester abortions .
- Alternative method for abortion where misoprostol is avoided.

Method & Material

Study Centre- Department of Obstetric & Gynaecology, Geetanjali Medical College & Hospital, Udaipur, Rajasthan.

Total 40 patients were studied.

Conducted in two group- GROUP A/ GROUP B

GROUP A. Vaginal misoprostol (200mcg) in 20 cases.

GROUP B. Extra amniotic 20% mannitol (100cc)+carbeprost 250 (intracervical foley's cathetorisation) in 20 cases.

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Inclusion Criteria

All women who are undergoing mid trimester abortions with unfavourable cervix

Exclusion Criteria

1. Already dilated cervix
2. Hemodynamically unstable
3. History of asthma
4. PPROM
5. Chorioamnionitis

At the time of admission detail history and complete general and physical examination was done f/b all investigations.

Procedure

- After evacuating the bladder patient is placed in lithotomy position.
- Foley's cathetor number 16/18 is placed intracervically and bulb is inflated with max capacity of 30 ml normal saline.
- 100 cc of mannitol is injected extra amniotically following which carbeprost 250 mg is also injected and continues traction is maintained.

Observation

Group A

1. Dose of 200 mg was selected which was repeated every 4-6 hrly.
2. Most of the patients were aborted with in 24 hour of induction.
3. Only four patient with h/o prev lscs aborted with in 30 hour.
4. 40%of patient complained of shivering and fever.
5. 50% of patients complained of vomitting and loose motions.

Group B

1. Extra amniotic instillation of 100ml mannitol (20%) is done via self retaining foley's catheter with carbeprost 250.
2. 20% of patient expelled bulb within 18-24 hrs follow which inj oxytocin was given.
2. Rest 80% of patients did not require any augmentation and aborted within 36 hrs.
3. Patients had almost no complaints apart from regular contraction.

Result

(Table 1) Shows the induction onset interval.

(Table 2) Shows the results.

(Table 3) Shows the time taken for abortion to occur after injection.

(Table 4) Shows comparison of side effect/ complication of both group.

The longest induction abortion interval was 45 hours and 80% with in 30 hours and 100 % delivered with in 36 hours.

(Graph 1) Shows the comparison between time taken of group A and group B

(Graph 2) Shows the comparison of side effect of both drugs

Patients were encouraged to drink plenty of water to ensure good diuresis. Urine output of these patients varied from 50-100 ml per hour.

No patient suffered any kind of fever or any side effect.

The induction onset interval varied from 2 hours to 10 hours but in the majority of patients labour started with in 3-4 hours. The mean induction onset interval was 3.1 hours and pains were extremely mild. Although 16 patients have been shown as complete abortion, only 1 patient had retained placenta. Remaining 4 cases required oxytocin augmentation.

Table 1: Group B, Mean induction time

Period of gestation	Period of gestation	Mean induction time
11-13	-	-
14-17	9	3.5hours
18-20	11	2.7hours

Table 2: Shows the result

	Group A	Group B	Total
Success Cases	20 (100%)	16 (80%)	36 (90%)
Failure Cases	0 (0)	4 (20%)	4 (10)
Total Cases	20 (100%)	20 (100%)	40 (100%)

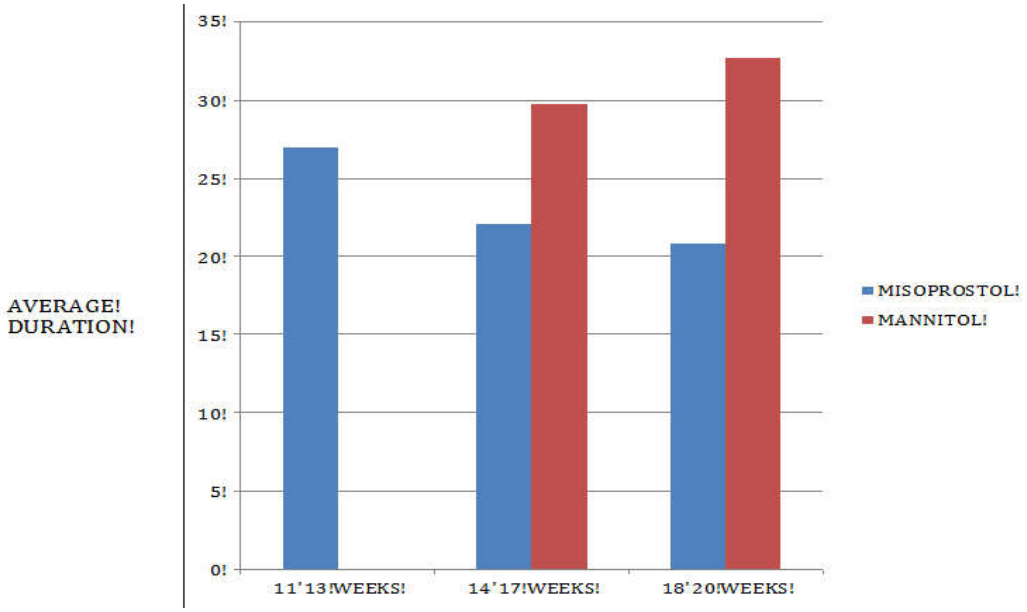
Table 3: Shows time taken for abortion after administration of drug

Period of Gestation	No. of Cases	Group A (HRS)	No. of Cases	Group B (HRS)
11-13	1	27	0	0
14-17	12	22.1	9	29.8
18-20	7	20.8	11	32.7
Average	-	23.3	-	31.55

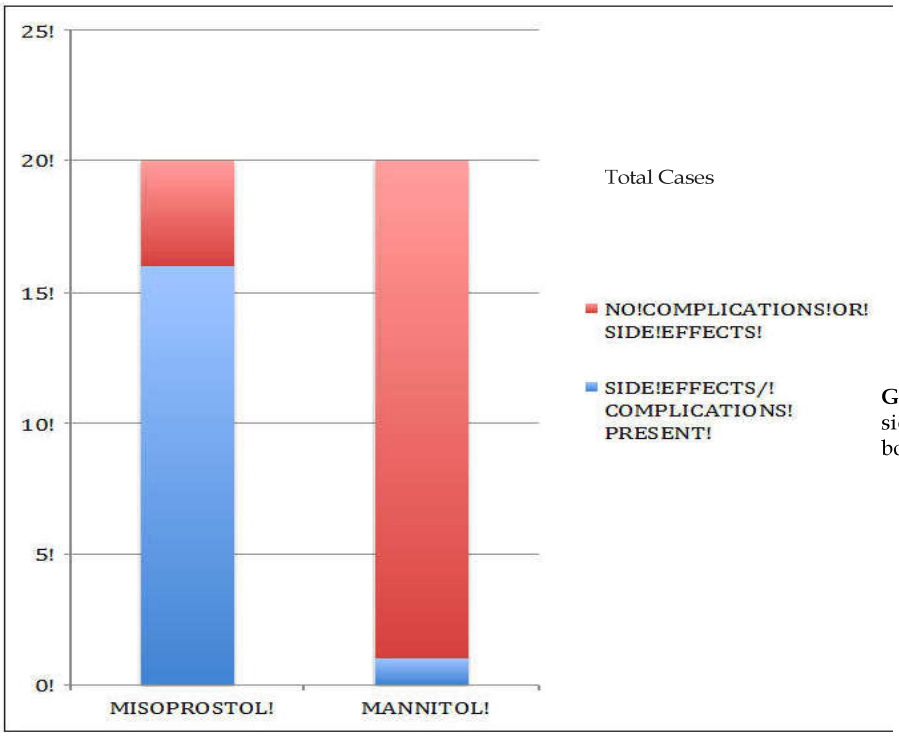
Table 4:

Side effect/ Complication	Yes	No
Misoprostol and Mannitol	16 and 1	4 and 19

P value < 0.001



Graph 1: Average duration of both drugs



Graph 2: Shows comparison of side effects and complication of both drugs

No patient required any emergency or operative interventions. None of the patients required any blood transfusion.

Discussion

Success rate with mannitol was almost 90%. This is less than that obtained with hypertonic saline and prostaglandin. This may be so because correct dosage needed had to be found out by trials. In cases with failed response, the labour had started and cathetor was expelled due to dilatation of cervix. Further dose of mannitol could not be given, and the patients aborted within 12 hrs of oxytocin drip.

Mannitol is polyhydric alcohol which is not metabolised in the body and acts as an osmotic diuretic. If excess amount of mannitol is infused it can cause increase in serum sodium hence routine use of saline with mannitol should be avoided as it can lead to hypernatremia. In oliguric patients unless urine volume exceeds 50 ml/hour, only 500 ml of mannitol is advisable. It is very safe to use in cardiac patients because of its diuretic property. Mechanism of its action is not worked out, but may be on decidual cells similar to one postulated to explain mechanism of hypertonic saline. Combining mannitol with carbeprost helps in myometrial contraction and favours myometrium for oxytocin receptors. Encouraged by the favourable experience gained in this study is being further continued .

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