

# THE EFFECTIVENESS AND SAFETY OF ORAL MISOPROSTOL AS COMPARED TO INTRAVENOUS OXYTOCIN IN LABOUR INDUCTION DUE TO PRELABOUR RUPTURE OF MEMBRANES AT TERM: A RANDOMISED CLINICAL TRIAL AT THE KENYATTA NATIONAL HOSPITAL.

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## ABSTRACT

### Background

Prelabour rupture of membranes (PROM) is associated with various maternal and fetal complications, the most notable being sepsis. Infection rates increase with the duration of rupture of membranes. Thus, timely induction of labour is recommended in order to reduce this complication. The timing of labour induction is related to the gestation if there are no other complications.

### Objective

To determine the efficacy and safety of oral misoprostol as compared to intravenous oxytocin in labour induction in mothers with prelabour rupture of membranes at term at the Kenyatta National Hospital.

### Design

This was a randomized clinical trial.

### Setting

Kenyatta National Hospital Maternity Unit.

### Participants

83 pregnant women with prelabour rupture of membranes at term without an indication for caesarian section were consented and randomized for labour induction with either oral misoprostol at a dose of 20mcg 2-hourly up to a maximum of 4-doses, or with intravenous oxytocin according to the WHO protocol. 41 were randomized to the misoprostol arm while 42 were randomized to the oxytocin arm.

### Main outcome measures

Induction to delivery interval; maternal complications and early neonatal outcomes.

### Results

The overall induction success rates in the misoprostol arm was 81% versus 83% in the oxytocin arm ( $P=0.447$ ). The mean induction to vaginal delivery interval in the misoprostol arm was 8.4 hours as compared to 9.45 hours in the oxytocin arm ( $P=0.116$ ). The caesarian section rates were 19% in the misoprostol arm and 17% in the oxytocin arm ( $P=0.447$ , table 4), which was not statistically significant. The maternal outcomes were similar in the two study arms. Four women had tachysystole in the misoprostol arm, compared to three in the oxytocin arm ( $P=0.253$ ). In the misoprostol arm two women had hypertonus compared to three in the oxytocin arm ( $P=0.322$ ). There was one case of hyperstimulation in the misoprostol arm and two in in the oxytocin arm. There were no differences in the fetal/ neonatal outcomes. No baby had an Apgar score of less than 7 at 1 or 5 minutes. No baby was admitted to the New Born Unit in either of the two arms.

### **Conclusion**

Oral misoprostol solution solution 20mcg 2-hourly is as efficacious and as safe as intravenous oxytocin for labour induction in women presenting with prelabour rupture of membranes at term at the Kenyatta National Hospital.

### **Recommendation**

Oral misoprostol solution administered at a dose of 20mcg 2-hourly can be used safely and successfully for labour induction in women with prelabour rupture of membranes at term at the Kenyatta National Hospital.