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COMPARING ELECTRONIC FETAL MONITORING WITH FETAL  
AUSCULTATION FOR NON-REASSURING FETAL STATUS  
SCREENING AT KIJABE HOSPITAL-KENYA

BY

20060125

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A THESIS SUBMITTED TO THE SCHOOL OF MEDICINE IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
AWARD OF DEGREE OF MASTER OF MEDICINE (FAMILY  
MEDICINE), DEPARTMENT OF MEDICINE, MOI UNIVERSITY

OCTOBER, 2009



## ABSTRACT

**Background:** Non-reassuring fetal status (suspected fetal distress) is associated with increased peri-natal mortality and morbidity. It is also a major contributor to operative obstetric interventions in Kenya today. Electronic fetal monitoring has been the standard in the developed countries while intermittent auscultation is the standard in Kenya. Tools used for monitoring fetal heart rate should be standardized across the country in order to draw proper comparisons for neonatal outcomes. This study compared two screening techniques for non-reassuring fetal status during labor for early neonatal outcomes. This was necessary to determine as to whether to adopt the newer method or to continue with standard method of monitoring.

**Broad objective:** To determine how maternal and fetal outcomes are associated with the two intrapartum fetal heart rate monitoring protocols at the Kijabe Hospital labor ward.

**Setting:** Kijabe Mission Hospital, Kenya.

**Design:** Quasi-experimental study

**Methods:** Women in established labor in the labor ward who met the inclusion criteria and consented were assigned to one of the two methods of intrapartum screening by consecutive allocation. A pre-tested patient data form was used to collect data. The data was analyzed using Statistical Package for Social Sciences (SPSS) program for Windows. Analysis methods included frequency tables, proportions and chi-square and two sample Students t-test to test the association between the screening methods and the continuous variables.

**Results:** Data on 131 consecutive eligible women was analyzed, 66(50.8%) from EFM method and 65(49.2%) from IFA. Cross-tabulation of categorical variables was performed. There were no neonatal seizures in either group. Caesarean sections were performed for 4(6%) of the women in the EFM and 1(1.5%) in the IFA methods, though this was not statistically significant ( $P=0.36$ ). SVD was performed for 61(91.1%) and 62(96.9%) in the EFM and IFA protocols respectively. Admission to NBU were (13.8%) and 9(15%) babies in the EFM and IFA methods respectively. There was no significant association between maternal and fetal demographic characteristics of age, parity and ethnicity with monitoring method ( $P=0.341$ ). Controlling for other factors, anticipated birth weight had a significant association with the monitoring methods ( $P=0.045$ ).

**Conclusions:** Maternal characteristics and fetal outcomes were statistically the same for both EFM and IFA methods of intrapartum fetal heart rate monitoring in a low risk population.

**Recommendations:** Intermittent fetal heart rate auscultation (IFA) is recommended in low risk women in active labor at Kijabe Hospital maternity ward. Similar studies in different hospitals are needed at different levels to compare with these findings.