



FOETAL MOVEMENTS COUNT AND FOETAL OUTCOME

Obstetrics & Gynecology

Dr. Surabhi Saharan

Senior Resident, Department of Obstetrics And Gynaecology, PDU Medical College, Churu Rajasthan

Dr Mansa Kumawat*

Senior Resident, Department of Obstetrics And Gynaecology, PDU Medical College, Churu Rajasthan. *Corresponding Author

ABSTRACT

BACKGROUND: Reduced fetal movements is considered as high risk pregnancy because the fetus is at high risk of hypoxia and sudden demise.

METHODS: Hospital based prospective study conducted on 130 pregnant women were included in this study.

RESULTS: Out of 14 patients with absent DFMC, 6 babies (42.86%) died and 8 babies (57.14%) survived. The association between Non Stress Test and mode of delivery was found statistically significant. 83.33% were admitted in NICU. Out of 24 patients presenting with non reactive NST, 20.83% (5) babies born with APGAR score more than 7 and 79.17% (19) babies had APGAR score 4-7.

CONCLUSION: The association between NST & DFMC and fetal outcome was found statistically significant.

KEYWORDS

DFMC, NST, Fetal outcome.

INTRODUCTION

Motherhood makes a woman complete and childbirth is the most beautiful gift, a woman is endowed with. As obstetricians, our ultimate goal remains to have a healthy mother and healthy child at the end of a normal uncomplicated pregnancy. Regular antenatal care throughout the pregnancy, tailored to a woman's need is required to ensure good outcome.

Fetuses with major malformations are generally more likely to demonstrate reduced fetal activity. However, normal or excessive fetal activity has been reported in anencephalic fetus. Reduced fetal movements is a common indication for assessment of fetal well being. Reduced fetal movements is considered as high risk pregnancy because the fetus is at high risk of hypoxia and sudden demise. A lack of vigorous motion may be related to abnormalities of the central nervous system, muscular dysfunction or skeletal abnormalities. Sedating drugs, which cross the placenta such as alcohol, methadone, benzodiazepines and other opioids can be associated with reduced fetal movements.¹

Perinatal period is the most vulnerable period in the life of an individual and the rate of death during this period is higher than any other period of life. Pre term births, infections, hypertensive diseases and intrapartum asphyxia are cited as most important contributors for perinatal mortality.² Almost 2/3rd of perinatal deaths occur due to obstetric factors, perinatal hypoxia and infections, which are preventable causes. To address this problem, various antenatal fetal surveillance methods have been devised in the past few decades and the search for best is still ongoing. Antepartum fetal testing is a compilation of methods devised to differentiate normal from compromised fetuses prior to onset of labor. The main techniques for fetal assessment are non-stress test (NST), contraction stress test (CST), Biophysical profile, fetal movements count, modified Biophysical Profile Score and Umbilical Artery Doppler Velocimetry.³ The NST and CST are two primary methods available for fetal surveillance but are poor predictors of an asphyxiated fetus.

MATERIAL AND METHODS

TYPE OF STUDY:

An observational study.

INCLUSION CRITERIA

- Age 18-35 yr.
- Singleton pregnancy of >37 weeks of gestation.
- Women with decreased fetal movements.
- Women giving written consent.

EXCLUSION CRITERIA

- Women with intrauterine fetal death.
- Women in labor.

STATISTICAL ANALYSIS

Continuous variables were summarised as Mean and Standard Deviation whereas nominal / categorical variables as proportion (%). Unpaired 't' test and parametric test were used for analysis of continuous variables while chi-square test / Fischer exact test and other non-parametric test was used for normal / categorical variables. p-value < 0.05 was taken as significant.

RESULTS

Table 1. association Of Perception Of Daily Fetal Movements (dfmc) After Admission with Fetal Outcome

DFMC	fetal outcome		Total
	Survive	Death	
Present	116 (100.00%)	0 (0.00%)	116 (89.23%)
Absent	8 (57.14%)	6 (42.86%)	14 (10.77%)
Total	124 (95.38%)	6 (4.62%)	130 (100.00%)

Chi-square=13.65 df=1 p-value=0.004

Out of 14 patients with absent DFMC, 6 babies (42.86%) died and 8 babies (57.14%) survived. The association between DFMC and fetal outcome was found statistically significant.

Table 2. Association Between Non Stress Test And Apgar Score At 5 Min

NST	APGAR score			Total
	1-3	4-7	>7	
Reactive	0 (00.00%)	24 (25.47%)	82 (74.52%)	106 (81.54%)
Non reactive	0 (0.00%)	19 (79.17%)	5 (20.83%)	24 (18.46%)
Total	0 (0.00%)	43 (33.08%)	87 (66.92%)	130 (100.00%)

Chi-square=54.97 df=2 p-value=0.001

Out of 24 patients presenting with non reactive NST, 20.83% (5) babies born with APGAR score more than 7 and 79.17% (19) babies had APGAR score 4-7.

The association between NST and APGAR score was found statistically significant.

Table 3. association Between Non Stress Test And Nicu Admission

NST	NICU admission		Total
	Yes	No	
Reactive	20 (18.77%)	86 (81.23%)	106 (81.54%)
Non reactive	20 (83.33%)	4 (16.67%)	24 (18.46%)
Total	40 (30.77%)	90 (69.23%)	130 (100.00%)

Chi-square=43.38 df=1 p-value=0.001

Out of 24 cases, 20 babies (83.33%) were admitted in NICU. The

association between Non Stress Test and NICU admission was found statistically significant.

DISCUSSION

Maternal perception of fetal movement is an inexpensive, noninvasive method of assessing fetal well-being. Monitoring fetal movement serves as an indirect measure of central nervous system integrity and function. Short-term observations of the fetus are best performed using real-time ultrasound imaging or Doppler ultrasound⁵. For home monitoring daily fetal kick count may be required. Advocating the use of DFMC chart requires counseling for awareness. Kick count or mild flicker can be explained along with variation due to muscle spasm in winter and liquor quantity.

A healthy fetus should move approximately three to five times within one hour. An alternative method is the Cardiff Count-to-Ten chart, whereby the patient records fetal movements during the course of usual daily activity. A period of 12 hours without at least 10 perceived movements is considered a warning signal⁶. If the test result is not reassuring, the patient should be evaluated with NST and USG⁵.

Out of 14 women, who persistently complained of DFM despite explaining DFMC, 6 had poor fetal outcome. The association between DFMC and fetal outcome was found statistically significant.

It is clear that complaints of decreased fetal movement are significant and warrant further evaluation⁶. The Society of Obstetrician and Gynecologists of Canada has recommended that DFMC could be used in cases identified to be at risk for fetal asphyxia⁷.

Out of 24 women who presented with non reactive NST, we found that 20.83% neonates had APGAR score at more than 7 at 5 minutes and 79.17% babies had APGAR score 4-7. The association between NST and APGAR was found statistically significant. Kikwai Willey Kibet et al⁸ also observed significant association between NST and APGAR score.

CONCLUSION

The association between NST & DFMC and fetal outcome was found statistically significant.

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