THE ADMISSION TEST AND ITS RELATION WITH LABOUR OUTCOME

DEBRA F PAES ● M.V. MATALIYA ● P.N. MHATRE

SUMMARY

A study evaluation of the role of admission test was undertaken where 100 cases were screened on the Corometric Foetal Heart rate monitoring system.

The patients included in the study were both normal as well as high risk.

On admission, a cardiotocographic strip of the fetal heart rate tracing was performed.

The outcome was then corelated with the admission test. It was found that except for acute events; the admission test was a good predictor of foetal well being during the next few hours in term fetuses.

INTRODUCTION

Since time immemorial, man has strived to hear the healthy thump of a baby in utero. We now have sophisticated instruments to measure the foetal heart rate electronically and make available patterns for interpretation.

The purpose of this study was to determine whether a short recording of the foetal heart rate immediately after admission might select those fetuses with hypoxia present on admission or those who were likely to become hypoxic in the next few hours of labour. The admission test also gives idea of those patients who require continuous electronic foetal monitoring.

MATERIAL AND METHODS

This study was conducted at N.W.M. Hospital during a three month period from December to February 1994-95 where 100 cases were screened on the Corometric Foetal Heart Rate Monitoring System Model No. 145.

Dept. of Obs & Gyn.N.W. Maternity Hospital, Bombay
Accepted for Publication on 11.1.96

The paper speed used was 1 cm/min. Patients selected were both normal as well as high risk patients admitted in early labour irrespective of parity and presentation, with a gestational age of equal to or more than 36 weeks. The patients for elective caesarean section were excluded from the study. Immediately after admission, 15-20 minutes strip of the foetal heart rate was recorded. The foetal heart rate traces within the period of admission were categorised as reactive, equivocal or ominous.

OBSERVATION AND ANALYSIS

The data base of the results, were divided into 2 groups:

Table I - compares the mode of delivery with the results of the admission test.

Table I

PART - I : ADMISSION TEST - MODE OF DELIVERY

Admission Test	Vaginal Delivery	Instrumental Delivery	Caesarean Section
Reactive - 58	52	5	1
Ominous - 9	1	2	6
Equivocal - 33			
Repeat			
Reactive - 19	19		
Ominous - 14	1	3	10

Table II

PART - II : ADMISSION TEST VIS A VIS FOETAL DISTRESS

Admission Test	Foetal Distress
Reactive - 58	1
Ominous - 9	8
Equivocal - 33	
Repeat	
Reactive - 19	-
Ominous - 14	10

Table II - compares the result of admission test with the presence of foetal distress ocurring later in labour.

It was found that when the Admission Test was reactive, only 1 patient developed foetal distress and was delivered by caesarean section with a good perinatal outcome. Five patients were delivered by instrumentation for indications other than foetal distress.

The patients who developed foetal distress did so 3 hrs; after the Admission Test.

When the Admission Test was ominous (9 cases) - 8 developed foetal distress out of which 6 had to be delivered by caesarean section and 2 by instrumentation with a good perinatal outcome.

The one patient who delivered vaginally was a multigravida a C/o pregnancy induced hypertension whose Admission Test showed an ominous pattern. She had a tonically contracted uterus with blood stained liquor supporting the diagnosis of abruptio placentae. However she progressed well and delivered normally with a good perinatal outcome.

DISCUSSION

Reviewing the literature, Leveno et al (1986) found that electronic FHR monitoring increases the diagnosis of foetal distress in both total and low risk pregnancies and increases the risk of caesarean section withour benefit as measured by customary neonatal morbidity criteria.

This supports the presence of a false positive rate in low risk pregancies

Table III
EFFECT OF FOETAL MONITORING ON CAESAREAN SECTION RATES

	690 High risk patients	Randomised controlled trial Caesarean section rate
Group I	Auscultation	6%
Group II	Electronic Foetal Monitoring	18%
Group III	Electronic foetal monitoring + scalp blood sampling	11%

Leveno et al; N. England Journal of Medicine.

for electronic monitoring of at least 5%. This study therefore recommended selective monitoring of high risk pregnancies. (Table III).

The association of GHR patterns and subsequent neurological development was studied by Painter et al (1988). Their data confirm that the majority of children considered to be at risk for cerebral palsy in early infancy are found to be developmentally normal at 7 years of age. The children in this sample improved in motor function without demonstration of mental retardation and early school problems were not evident.

CONCLUSION

Concluding, one wonders whether the pioneers of Electronic Foetal Monitoring like E.Hon, Caldyro Barcia, Hammoch, had ever dreamed of the controversies which abound in this particular topic today. However, our study suggests that the Admission Test might be a good predictor of foetal well being during the next few hours in term fetuses except for acute events.

Today with electronic foetal monitoring the incidence of operative delivery is certainly on the rise.

Orr (1990) stated in his preface that, "while it is necessary to describe new work it perhaps is even more important to record movements of thought and trends of opinion."

Thus in our pursuit for newer technologies the basic art of auscultation should not be lost.

REFERENCES

1. *Leveno J. Cunningham F G.N. Sheryl, Roark M. N. Engl. J. Med., 315: 615; 1986.*
2. *Orr C., Recent Advances in Obstet. & Gynaec. 16:111; 1990.*
3. *Painter M.J, Scott JM, Hirsen RP, O'Donoghue P, Depp R; Am. J. Obstet Gynec, 159: 854, 1988.*