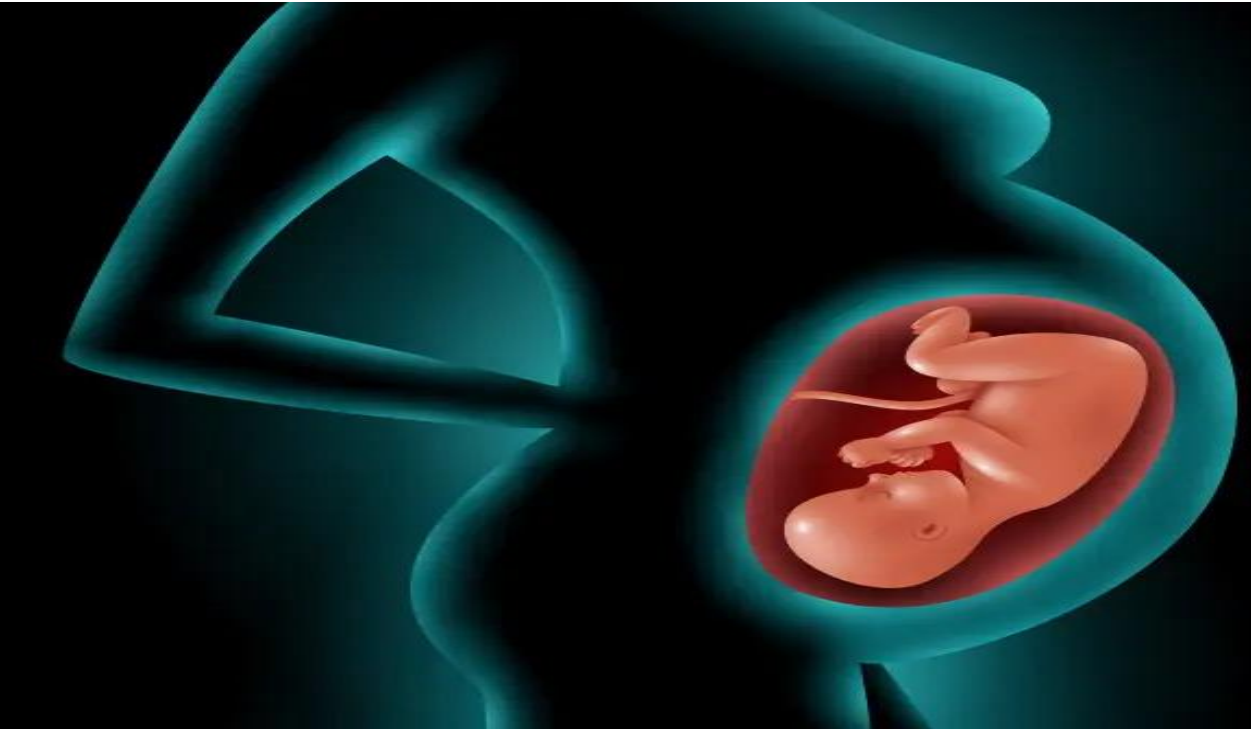


PERINATAL OUTCOME IN WOMEN PRESENTING WITH REDUCED FETAL MOVEMENT AT TERM

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OBJECTIVE

To determine perinatal outcome in women presenting with reduced fetal movement at term gestation.

INTRODUCTION

Normal fetal movements during pregnancy are typically perceived as a sign of a healthy central nervous system and sufficient oxygenation¹. Many international standards emphasize RFM as a crucial warning sign linked to the fetus's risk of stillbirth, and mothers are advised to keep an eye on their baby's movements and contact their clinicians if they have any concerns^{2,3}. The evidence, however, is still insufficient to warrant the inclusion of RFM in national recommendations and as part of a more comprehensive stillbirth reduction strategy ^{4,5}.

Reduced awareness of fetal movements reported by mothers enables the early detection, prompt assessment, and intervention for fetuses who may have unfavorable outcomes. This study is aimed to evaluate the pregnancy features and outcomes of expectant mothers who presented to hospitals with reduced fetal movements (RFM), so that appropriate counselling of patients can be done and timely interventions can be planned.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted in Hamdard University Hospital Karachi during January 2021 to June 2021, 216 pregnant women with reduced fetal movement at term were recruited from outpatient clinics, wards and labour room triage. All women having single fetus and term gestation according to LMP (last menstrual period) with maternal perception of reduced fetal movements of less than 10 in 2hrs were included.

Data was collected regarding number of episodes of the reduced fetal movements, maternal age, gravidity, BMI, gestational age, CTG category, ultrasound finding, mode of delivery, induction of labour, neonatal birth weight, APGAR score, NICU admission, stillbirth/ IUFD, presence of meconium and early neonatal death. Data was collected on a pre-formed performa and analysed using frequencies, percentages and Chi square test of association on SPSS version 26.

RESULTS

Findings of the study revealed that 60.6% women had one episode and 39.4% women had two episodes of reduced fetal movements(Figure 1). 79.1% belonged to age group 21 to 30, 70.8% had normal BMI, 52.3% were primigravida, 62.5% reported the duration of RFM for 24 hours, 66.2% reported a suspicious CTG on admission and 49.5% had normal vaginal delivery (Table 1).

Nearly 1/4th of the neonates were low birth weight, 1/5th of the babies had Apgar score less than 7 in five minutes, 9.3% neonates had cord around the neck and 1/3rd of the neonates were admitted to the NICU (Table 2). Chi square test of association revealed that maternal factors such as maternal age, BMI, gravidity were significantly associated with reduced fetal movements. Fetal outcomes such as NICU admission and presence of meconium were significantly associated.



Table I Maternal Characteristics Associated with Reduced Fetal Movements					
Characteristics	No.	%	02 (n=85)	01 (n=131)	X2 p-Value
Maternal Characteristics					
Age of the Mother					
15-20	19	8.8	8	11	0.018
21-25	83	38.4	27	56	
26-30	88	40.7	45	43	
31-35	22	10.2	5	17	
36 or more	4	1.9	0	4	
BMI of Mother					
17 or less	4	1.9	4	0	<0.001
18-25	153	70.8	68	85	
26-30	49	22.7	8	41	
31-35	10	4.6	5	5	
Gestational Age of Patient in Weeks					
37 weeks	23	10.6	13	10	0.331
38 weeks	71	32.9	28	43	
39 weeks	65	30.1	23	42	
40 weeks	57	26.4	21	36	
Gravidity					
primigravida	113	52.3	26	87	<0.001
2 to 4	83	38.4	47	36	
5 and above	20	9.3	12	8	
Duration of Reduced Fetal Movement					
12 hrs or less	11	5.1	2	9	<0.000
For 24 hrs	135	62.5	67	68	
For 48 hrs or more	70	32.4	16	54	
CTG of Patient on Admission					
Normal	54	25	18	36	0.492
Suspicious	143	66.2	58	85	
Pathologic	19	8.8	9	10	
CTG Before Delivery					
Normal	91	42.1	32	59	0.282
Suspicious	96	44.4	38	58	
Pathological	29	13.4	15	14	
Placental Position					
anterior and upper	23	10.6	7	16	0.244
posterior and upper	193	89.4	78	115	
Mode of Delivery					
Normal vaginal delivery	107	49.5	40	67	0.378
Instrumental vaginal delivery	44	20.4	15	29	
C Section	65	30.1	30	35	
Induction of Labor					
Yes	44	20.4	17	27	0.528
No	172	79.6	68	104	

Table II Fetal Characteristics Associated with Reduced Fetal Movements					
Characteristics	No.	%	02 (n=85)	01 (n=131)	X2 p-Value
Fetal Characteristics					
Weight of Baby (Kg)					
2.5kg or less	55	25.5	19	36	0.248
more than 2.5 kg	161	74.5	66	95	
APGAR Score of baby					
Less than 7 in 5 mins	43	19.9	12	31	0.06
More than 7 in 5 mins	173	80.1	73	100	
Cord Around Neck					
Yes	20	9.3	15	5	<0.001
No	196	90.7	70	126	
NICU Admission					
Yes	72	33.3	20	52	0.01
No	144	66.7	65	79	
Still Birth					
No any					
Intrauterine Fetal Death					
No Any					
Presence of Meconium					
Yes	37	17.1	6	31	0.001
No	179	82.9	79	100	
Early Neonate Death					
Yes	13	6	3	10	0.256
No	203	94	82	121	

CONCLUSION

There is sufficient evidence that reduced fetal movements result in worse fetal outcomes. Episodes of RFM were significantly associated with age, BMI, gravidity of mother, presence of meconium and NICU admission of new born leaving a financial and psychological burden on parents. Mass education for mothers during antenatal care is strongly recommended for prevention of risk factors leading to reduced fetal movements.

KEY WORDS

Reduced fetal movements (RFM), body mass index (BMI), neonatal intensive care unit (NICU)

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