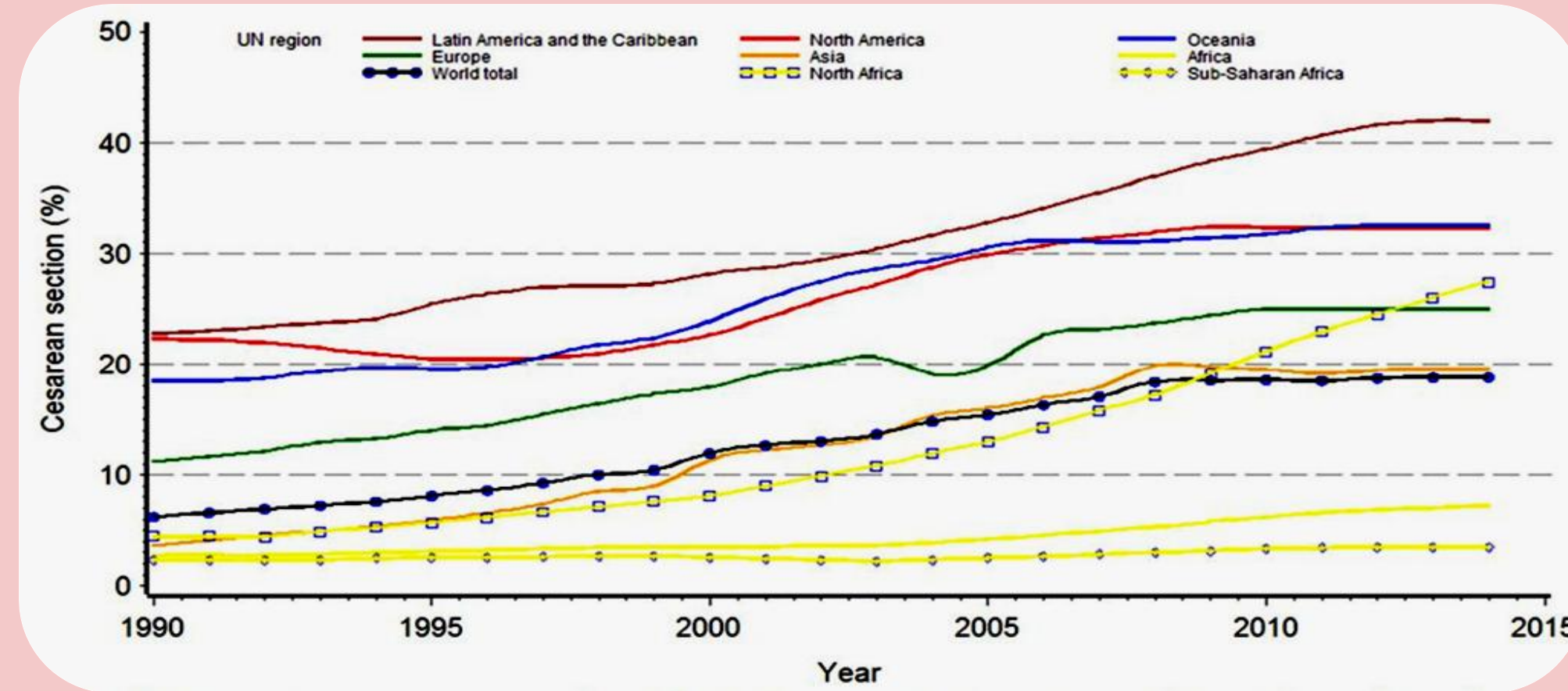




Category II (Suspicious) CTG: A Questionable Indication for C-section A Hospital-based Audit at Tertiary Care Hospital in Pakistan

INTRODUCTION

Caesarean section (CS) rate is rising globally. ACOG Category II (Cat-II), synonymously called suspicious or non-reassuring trace on cardiotocography (CTG) is one of the commonest indications of emergency CS but CTG interpretation is observer-dependent with high chances of misinterpretation of CTG traces. Moreover, the neonatal outcome with Cat-II trace is indeterminate. This knowledge gap necessitates further research.



Global and regional trends of CS
1990- 2014

OBJECTIVES

- To evaluate the quality of interpretation of CTG traces
- To find an association of Cat-II CTG and its different features with neonatal outcome in terms of APGAR scores and NICU admissions
- To find an association of risk factors in women with Cat-II CTG and neonatal outcomes

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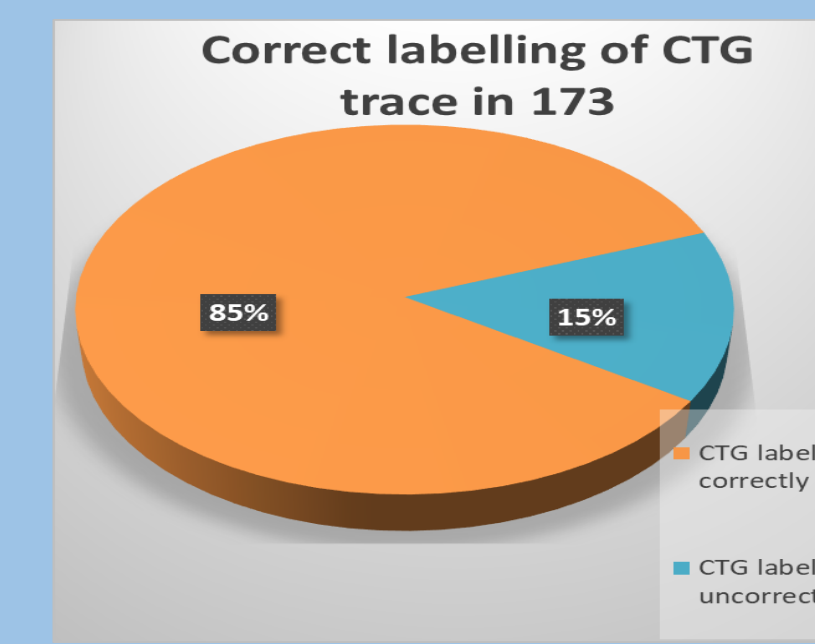
METHODOLOGY

Study Design: Retrospective cross-sectional study with ongoing prospective limb

Method: The study was conducted at the Department of Ob/Gyn, Holy Family Hospital, Rawalpindi. It's the largest tertiary care hospital in that region. A total of 200 hospital case records of women, who underwent CS with Cat-II CTG, as the sole documented indication, were included. Two postgraduate residents, who were purposely trained for CTG interpretation collected the data. We cross-checked all the CTG traces and all the relevant data were collected on structured proformas and entered in SPSS version 25 for analysis..

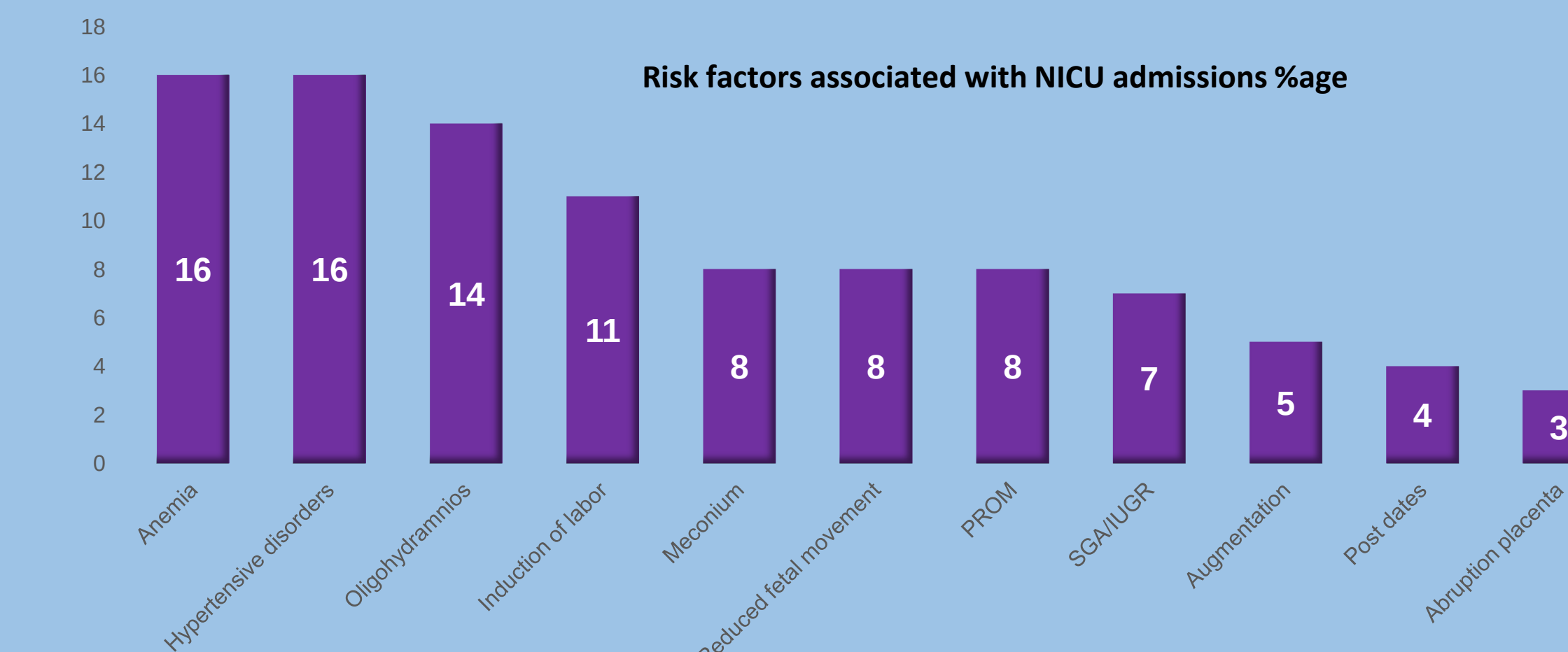
RESULTS

Total CTG traces: 397

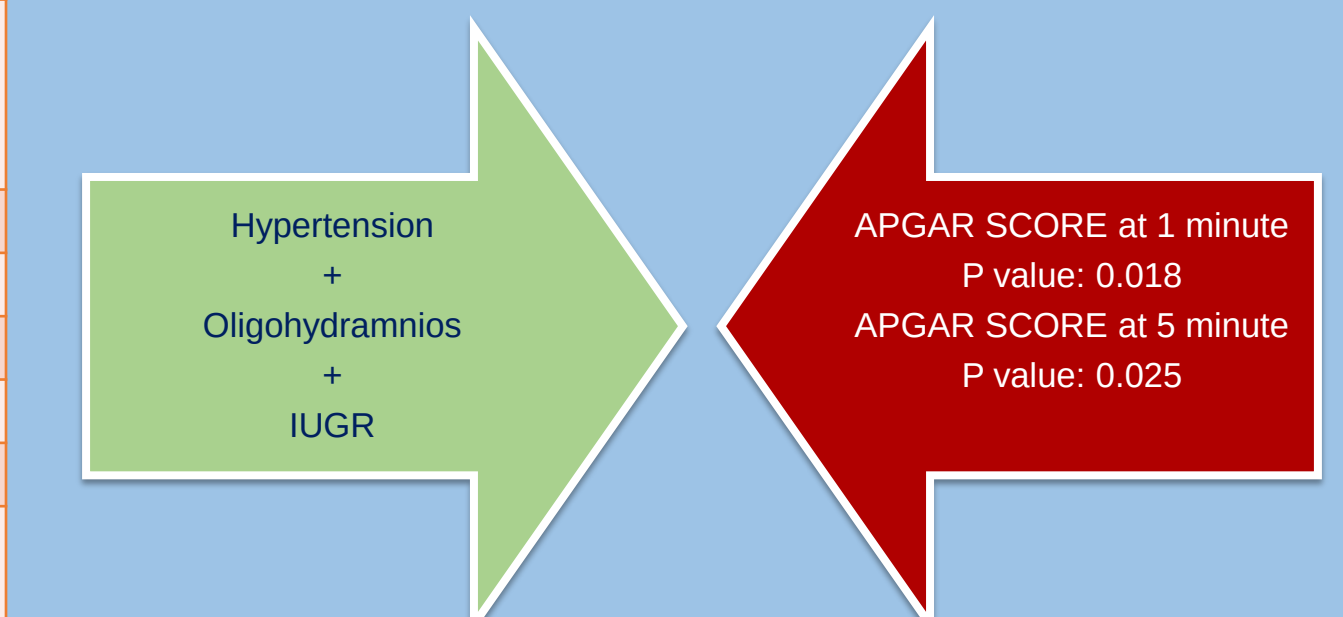


CTG Features with APGAR at 1minute (N=200)

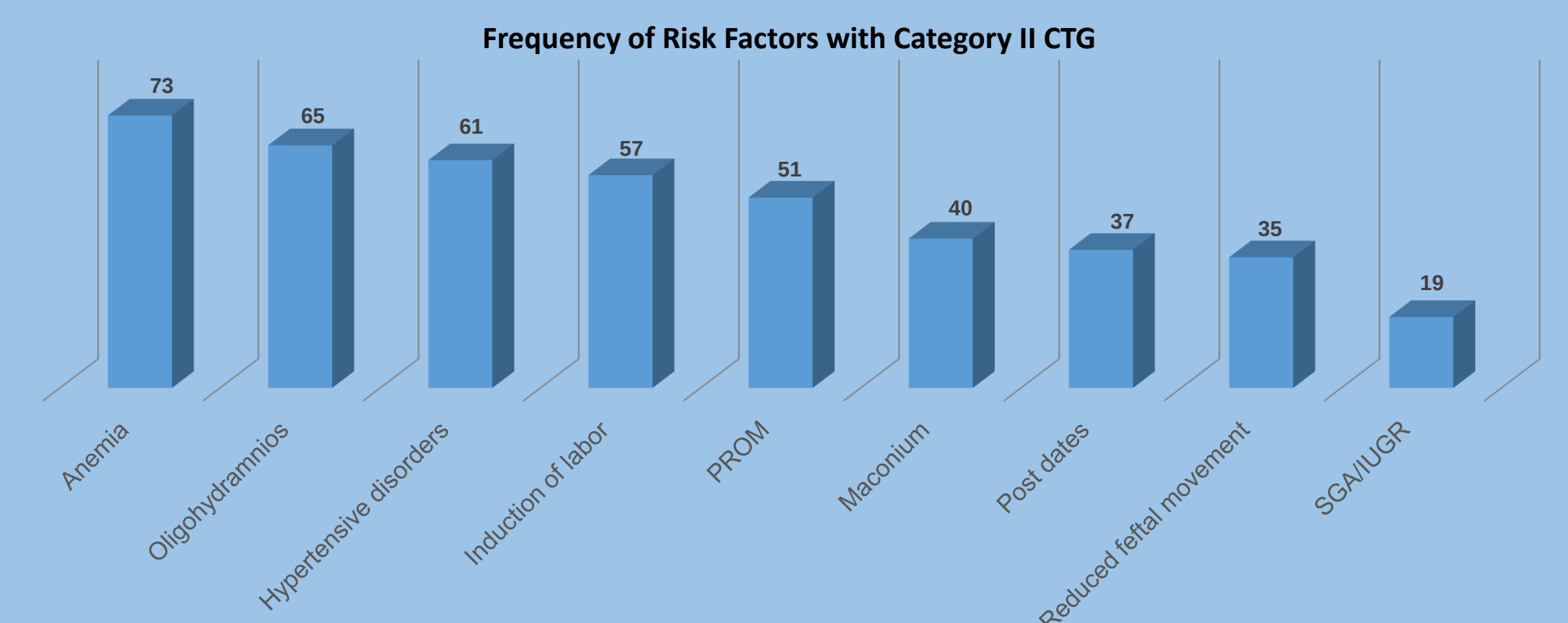
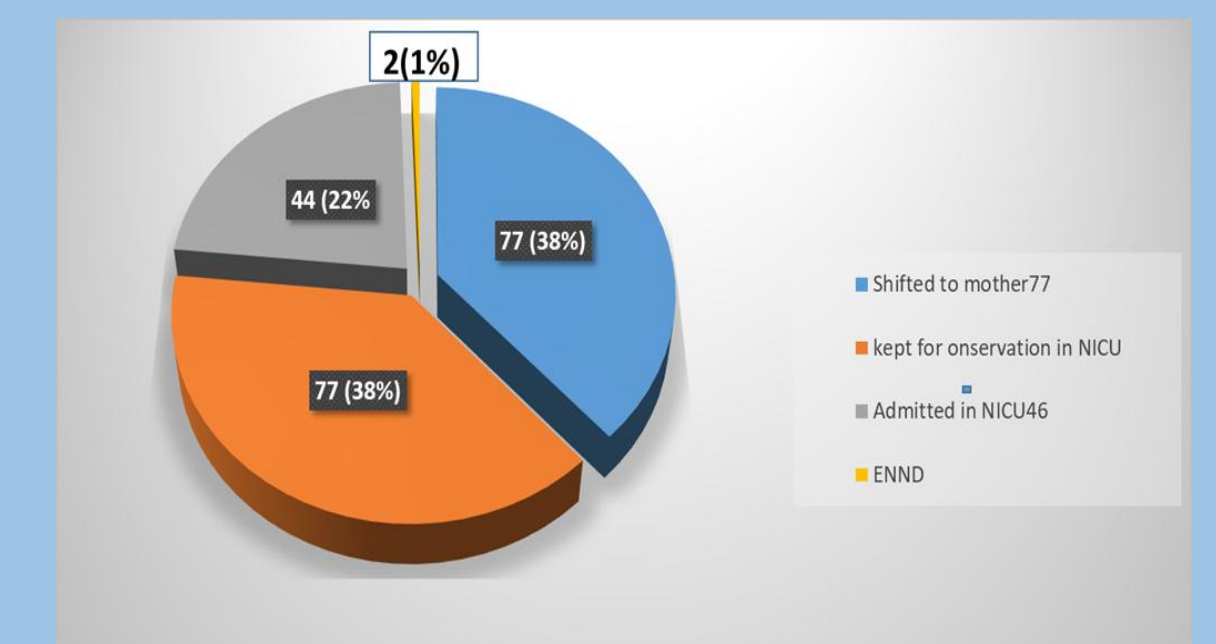
Feature	Normal –f (%)		Abnormal – f (%)		P-Value
	Low (<7)	Reassuring (>=7)	Low (<=7)	Reassuring (>=7)	
1. Baseline FHR	37 (18.5)	132 (66)	11 (5.5)	20 (10)	0.103
2. Variability	08 (4)	44 (22)	40 (20)	108 (54)	0.091
3. Accelerations	04 (2)	18 (9)	44 (22)	134 (67)	0.498
4. Decelerations	25(12.5)	67 (33.5)	23 (11.5)	84 (42)	0.351
5. Shoulders	37 (18.5)	124 (62)	11 (5.5)	28 (14)	0.493
6. Sinusoidal Pattern	46 (23)	150 (75)	02 (1)	02 (1)	0.219



Association of risk factors with APGAR score at 1 min & 5 min



Neonatal outcome: NICU admissions



DISCUSSION

□ In a study at Isreal (2018), the CTG features associated with perinatal asphxia are reduced fetal heart rate variability fetal tachycardia. The result of our study is consistent with one of these features

□ The presence of meconium is associated with increased risk of neonatal morbidity in women with Cat II CTG in our study, result comparable with a study at Washington University, Saint Loius (2014)

CONCLUSIONS & RECOMMENDATIONS

- ❖ Correct interpretation of CTG by expert obstetrician and proper protocol of repeating two CTGs before decision for CS must be followed.
- ❖ Regular audits of CS done due to this indication should be conducted.
- ❖ Workshops for training obstetricians in interpretation of CTG should be arranged

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