

Title: Chasing the Ticking Clock: Uncovering the Risk Factors of Iatrogenic & Spontaneous Preterm Births.

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INTRODUCTION

- Preterm birth, birth occurring before 37 weeks, is a leading cause of perinatal mortality and morbidity, with a disproportionate burden on developing countries.
- In India, it accounts for 13-15% of live births. The etiology is multifactorial, including maternal demographics, past obstetric history, pregnancy complications, and infections.
- Accurate data on risk factors can provide insights into the mechanisms of preterm birth, guide the application of targeted interventions to reduce future preterm births, and improve perinatal outcomes..

AIMS / OBJECTIVES

- **Primary Objective:**
To assess the risk factors associated with spontaneous and iatrogenic preterm births.
- **Secondary Objective:**
To assess the various neonatal outcomes in iatrogenic and spontaneous preterm births.

MATERIAL / METHODS

- A prospective observational study of 1-year duration (Feb 2024 to Feb 2025) was conducted at KAHER’s Dr. Prabhakar Kore Hospital & MRC Belagavi, involving women delivering between 24 weeks and 36 weeks 6 days in the labor room, with a sample size of 130 eligible preterm births.
- Births were grouped as **Iatrogenic** and **Spontaneous** based on the mode of onset, and neonates were followed up for 7 days after birth.

Inclusion Criteria:

All live singleton births between 24 weeks and 36.6 weeks.

- **Iatrogenic:** A record of induction of labor or cesarean section not in labor.
- **Spontaneous:** Onset of labor is spontaneous.

Exclusion Criteria:

Stillbirths, multiple gestation, PPRM, and life-threatening congenital malformations.

- A total of 240 preterm births were screened, with 130 eligible.
- Maternal demographic factors, risk factors, indications for iatrogenic termination, and previous preterm births were observed. The cause, duration, and rate of NICU admission, along with complications during the perinatal period, were observed.

RESULT

The mean gestational age for preterm births was 34.7 weeks, with an average maternal age of 26.8 years. Most women were from rural areas and lower socioeconomic backgrounds. Iatrogenic births accounted for 62.3% , while spontaneous births made up 33.8% .

Indication for Iatrogenic preterm births : (N : 81)

Maternal - 40 (49.3%)	Fetal- 41 (50.6%)
Severe PE: 21 (25%)	FGR+doppler changes (30%)
Oligamnios: 8 (9.8%)	Abnormal FHR: (16%)

MATERNAL RISK FACTORS	IATROGENIC (N : 81)	SPONTANEOUS (N: 49)
PREVIOUS PTB	17 (20.2%)	9 (18.5%)
PE / PIH	41 (50.6%)	5 (10%)
GDM / ODM	13 (16.0%)	2 (49%)
Med. Diseases	10 (12.5%)	19 (38.7 %)
Nil	–	17 (34.6%)
NICU admission	60 (73%)	22 (26%)
RDS	31 (51.6%)	10 (45.4%)
Jaundice	36 (60%)	18 (81%)
AOP	7 (11.6%)	5 (22.7%)

DISCUSSION

Merits: The comparative study design, with clear inclusion and exclusion criteria, comprehensive data collection, and appropriate statistical analysis, enhances its validity.

Demerits: The study was carried out exclusively at one location, with a short follow-up period & a small sample size.

CONCLUSION

The study findings provide a general overview of the etiology and outcomes of preterm births in a rural and semi-urban setting in southern India. Preeclampsia, IUGR, higher LSCS rates, and NICU admissions were significantly associated with the iatrogenic group. The spontaneous group showed a significant association with diabetes of pregnancy, medical disorders, and neonatal jaundice.

REFERENCES

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