

A Observational Study on Preterm Labour and its Perinatal Outcome

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1. Introduction

- Preterm labor is defined as the presence of uterine contractions of sufficient frequency and intensity to result in progressive effacement and dilatation of the cervix, before 37 weeks of gestation after the period of viability that is after 20 weeks period of gestation.
- Preterm labor is one of the most common complications in pregnancy leading to neonatal mortality and morbidity
- Preterm births are responsible for 75% of the neonatal mortality and for 50 % of the long - term neurologic impairment in children
- Several factors contribute to preterm birth, these factors are:
- Age, interpregnancy interval, BMI, family history, demographic factors and psychological factors, previous preterm delivery, anaemia, medical disorders, infections, substance abuse, smoking, uterine anomalies, pregnancy following assisted reproductive techniques, vaginal bleeding, hydramnios, shortened cervical length, cone excision, LEEP

Preterm labor	30 - 50%
Multiple gestation	10 - 30%
PPROM	5 - 40%
Pre eclampsia	12%
AP bleeding	6 - 9%
IUGR	2 - 4%
Cervical incompetence	8 - 9%

Aims of the study

- To study the perinatal outcome of preterm birth
- To identify the cases which need intervention

- To identify the risk factors associated with preterm birth

2. Materials and Methods

Duration of study: 1 year (may 2022 to may 2023)

Type of study: Hospital based observational study

Study Centre: Department of Obstetrics and gynecology in raja Rajeshwari medical college and hospital

Selection criterion

Inclusion criterion: All pregnant women admitted for preterm labor in the department of obstetrics and gynecology in RR

Exclusion criterion:

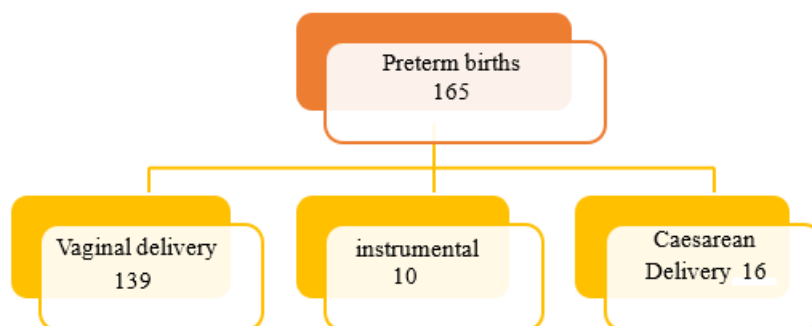
- Patients not willing to get enrolled in the study.
- Term patients (>37 weeks period of gestation)

A total of 165 preterm deliveries were enrolled for the study.

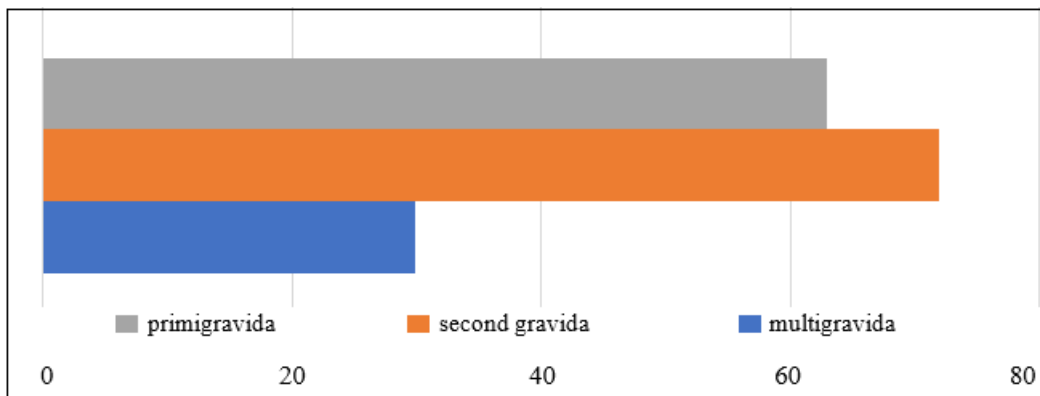
Data was collected through review of perinatal and hospital delivery records.

3. Results

Out of a total of 165 preterm deliveries, 84% were preterm normal deliveries and 9.1 % were caesarean deliveries. And 6% were instrumental delivery



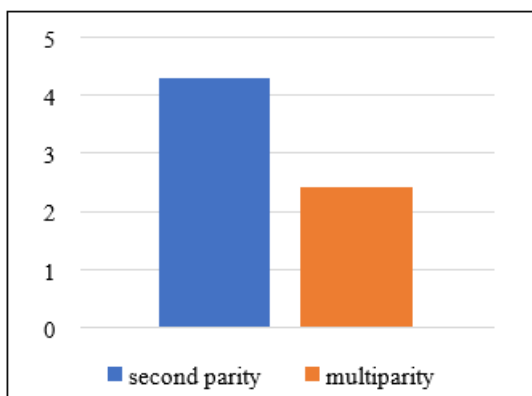
The following figure shows Distribution of preterm birth according to parity



History of previous preterm birth according to parity

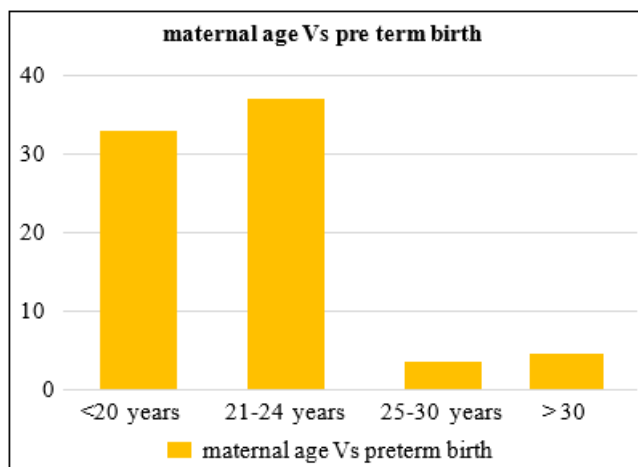
Out of 165 preterm deliveries, 30 were multigravida, 72 were second gravida and 63 were primigravida.

Preterm birth according to maternal age out of 165 preterm deliveries.

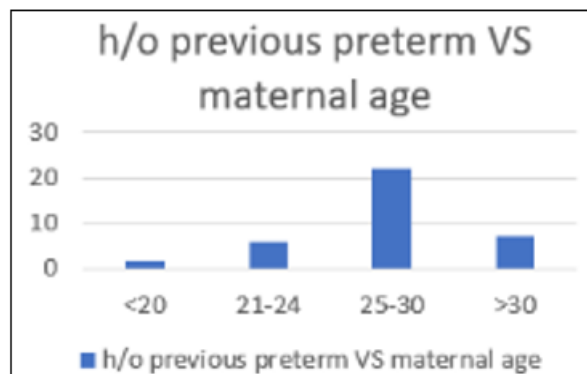


Out of 165 preterm births 27 were second para and 11 were multipara.

History of Previous Preterm birth according to maternal age



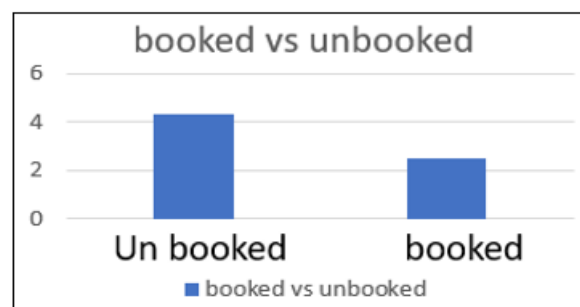
< 20 years	33
21- 24 years	37
25- 30 years	70
> 30 years	25



< 20 years	02
21- 24 years	6
25- 30 years	22
> 30 years	7

Preterm is common with increasing age

The following figure shows booked and un booked cases out of 165 preterm deliveries



Out of 165 deliveries booked cases were 66 and un booked cases were 99.

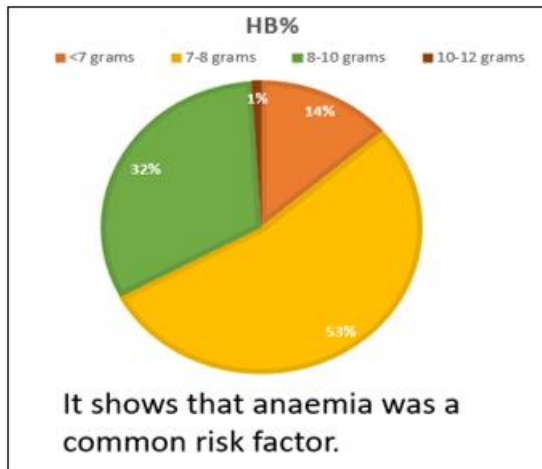
Un booked cases were more.

Gestational age at the time of delivery and distribution of preterm

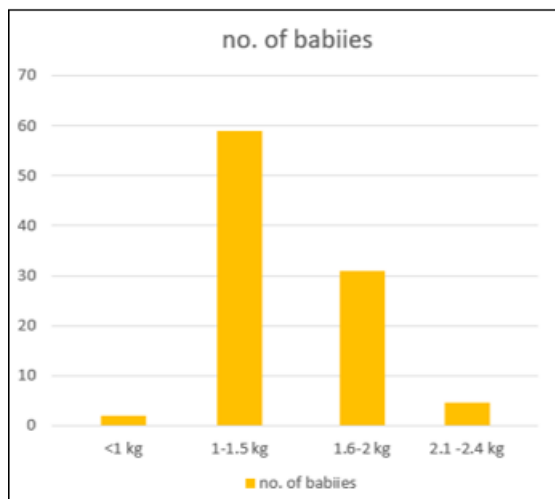
Gestational Age	No. of babies
20- 24 weeks	5
24- 28 weeks	17
28- 32 weeks	68
32- 36 weeks	75

It shows that most preterm deliveries happen between 28 - 36 weeks of gestation

Preterm birth distribution according to anaemic condition of the mother



Foetal weight distribution in preterm birth



Weight	No. of babies
<1 kg	2
1- 1.5kg	59
1.6- 2 kg	31
2.1- 2.4kg	73

Maternal Risk factors associated with preterm labour

Antepartum haemorrhage	37
Multiparity and hydramnios	29
hypertension	23
Febrile conditions	18
Anaemia	12
PROM	18
Cervical incompetence	14
Others	14

Fetal outcome

RDS	42
Hypothermia	148
Sepsis	59
Perinatal asphyxia	16
Jaundice	20
Congenital anomaly	3
Hypoglycaemia	130
Others	3

4. Discussion

- Overall NICU admissions was 52.0%.
- Out of a total of 165 preterm deliveries, 84 percent women underwent normal vaginal delivery. 44.11% were second gravida and 38.6% were primigravida and 18.38% were multigravida. History of preterm birth was seen more in second parity.
- Preterm birth (42.6%) and history of previous preterm delivery (14.3%) was seen more in the mothers who aged between 25 – 30 years on age
- Preterm birth was seen more among un - booked cases (55.1%) and 44.4% of the booked cases had preterm delivery.
- 67% mothers had haemoglobin levels between 7 - 8 gm% making anaemia an important risk factor for preterm delivery.
- 44.1% preterm deliveries occurred between 28 - 36 weeks period of gestation.
- 89.9% preterm babies had hypothermia and 25% preterm babies had respiratory distress syndrome. And 79% babies had hypoglycaemia.

5. Conclusion

- **Inadequate prenatal care** is associated with an **increased risk of preterm delivery**. this association may be due to other aspects like **socioeconomic or psychological factors**.
- Improvement programs, like increased prenatal visit, patients education, home visits, nutritional counselling, social and psychological support have effect on the rate of preterm deliveries
- Screening for risk factors in pregnancy includes monitoring of uterine activity, detection and treatment of infections. Cervical cerclage, tocolysis and progesterin therapy whenever indicated may be effective in selected patients in prolonging pregnancy.
- **Regular antenatal visits, good nutrition, encouraging proper hygiene will be the most important factors to reduce the percentage of preterm births.**

References

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