



MULTIPLE PREGNANCY AND PRETERM LABOUR

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ABSTRACT

Background: Preterm birth is a leading cause of perinatal mortality and long-term morbidity as well as the long-term health consequences and cognitive outcomes. **Objective:** Multiple gestations are high risk pregnancies, which may be complicated by pre-maturity, low birth weight infants, pre-eclampsia, anemia, postpartum hemorrhage, intrauterine growth restriction, neonatal morbidity and high perinatal, neonatal and infant mortality. This study was carried out to determine the incidence and effect of multiple pregnancies on pre-term labor in tertiary care hospitals. **Setting:** A total of 36 patients were included in the study. Data of patients with twin pregnancies and preterm birth were recorded. This study was conducted at Niazi Medical and Dental College, Sargodha. **Methods:** This descriptive study was conducted at Niazi Medical and Dental College, Sargodha. The study population comprised women with twin pregnancies who were admitted to hospital in a time span of 1 year at 36 weeks. The patients with multiple pregnancies (commonly twin) and preterm labor were included in the study. All the patients with twin pregnancies had preterm labor.

KEYWORDS: Preterm labour, multiple pregnancies, IUGR, Preeclampsia.

INTRODUCTION

Multiple pregnancies are associated with high incidence of preterm delivery. The increased incidence of preterm labor was reported as 44% in Scotland and 1-3% in United States. The vast majority (97-98%) are twin pregnancies. Multiple pregnancies constitute significant risk to both mother and fetus.^[1] Preterm delivery is the leading cause of maternal mortality and morbidity and the incidence in twin pregnancies is five to ten times higher than in singleton.^[2]

Preterm labor is usually defined as regular contractions accompanied by cervical change at less than 37 weeks' gestation.^[3] During the last two centuries the twin birth rates have increased worldwide. The main contributors to this rise are the increasing childbearing age and the use of assisted reproductive technologies (ART) including IVF and other procedures such as ovulation induction and intrauterine insemination.^[4] Multifetal pregnancies increase the risk of pregnancy complications and adverse outcomes for mothers and babies and hence require a higher level of care than singleton pregnancies.^[5] Women with a multifetal pregnancy are at increased risk of hypertensive disorders, gestational diabetes, preterm

birth, antepartum and postpartum hemorrhage, and are more likely to deliver by Caesarean section and to have serious maternal morbidity. Because maternal and fetal risks increase according to the number of fetuses, multifetal pregnancies should be assessed separately from singleton pregnancies. In practice, this has often meant that studies include only singleton pregnancies and are rarely repeated for multifetal pregnancies.^[6] Little health services research has specifically examined multifetal pregnancies. Preterm delivery and its short-term and long-term sequelae constitute a serious problem in terms of mortality, disability, and cost to society.^[7]

The incidence of preterm delivery, which has increased in recent years, is associated with various epidemiological and clinical risk factors.^[8]

The obstetric precursors leading to preterm birth are: (1) Intra uterine growth restriction (IUGR) (2) Preeclampsia (3) preterm premature rupture of the membranes (PPROM) (4) abruption of placenta.^[9]

Fetal or intrauterine growth restriction (IUGR) is associated with perinatal mortality and morbidity. IUGR is a condition with an increased risk of a pathological

condition that adversely affects the inherent potential growth of the fetus and preterm birth. Ideally, the diagnosis of IUGR is a two-step procedure: 1) restriction of the growth restriction by ultrasonography, and 2) identification of a specific cause. Intrauterine growth retardation (IUGR) is mainly due to a pathologic slow-down in the pace of fetal growth, resulting in a fetus that is unable to reach its growth potential. That requires a good balance between this and the environment in which it develops during pregnancy. Preeclampsia accounts for more than 40% of premature deliveries and is also the most important cause for maternal mortality and morbidity in developing countries. The maternal endothelium is the ultimate target leading finally to preeclampsia where free radicals evoking endothelial-cell activation are obviously promoters of maternal vascular malfunction.^[10]

followed till preterm delivery. The minimum age was 21 and maximum age was 39. The mean of the age was 30 years (Table 1). During this time span, the patients were observed, and the results were noticed. Due to preterm birth, premature rupture of membrane, preeclampsia, IUGR, abruption of membrane was noticed among the patients. Among 36 patients, membrane rupture occurred in 10 patients (table 2). Preeclampsia was seen in 6 (table 3), IUGR in 4 (table 4) and placental abruption was seen in 1 patient (table 5). In the study, beside these pathologies, among 36 patients' preterm birth was also caused by unknown causes. 15 patients had preterm birth because of these unknown causes which were not detected by Ultrasonography.

RESULTS

In this study, a total of 36 patients were taken with multiple specifically twin pregnancy. The patients were

Table 1: Descriptive analysis of age.

| Descriptive Statistics of age | N | Minimum | Maximum | Mean | Std. Deviation |
|-------------------------------|----|---------|---------|---------|----------------|
| Age | 36 | 21.00 | 39.00 | 30.0556 | 4.64724 |

Table 2: Rupture of membrane in patients.

| Membrane rupture | Frequency | Percent |
|------------------|-----------|---------|
| No | 26 | 72.2 |
| Yes | 10 | 27.8 |
| Total | 36 | 100.0 |

Table 3: Preeclampsia in women.

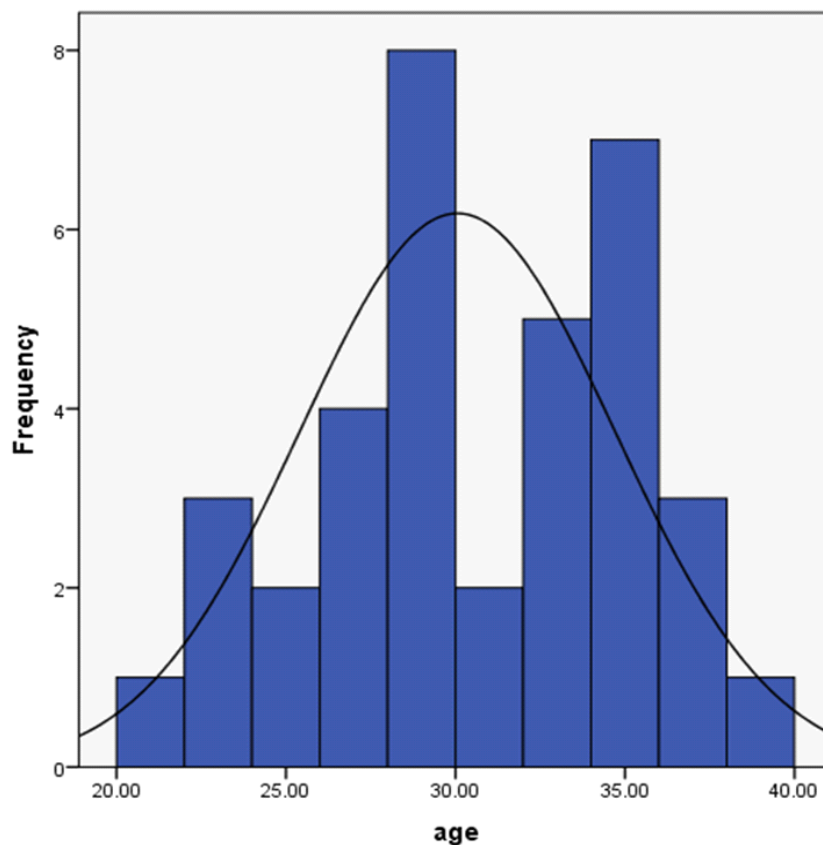
| Preeclampsia | Frequency | Percent |
|--------------|-----------|---------|
| No | 30 | 83.3 |
| Yes | 6 | 16.7 |
| Total | 36 | 100.0 |

Table 4: IUGR in patients.

| IUGR | Frequency | Percent |
|-------|-----------|---------|
| No | 32 | 88.9 |
| Yes | 4 | 11.1 |
| Total | 36 | 100.0 |

Table 5: Placental abruption in women.

| Placental abruption | Frequency | Percent |
|---------------------|-----------|---------|
| No | 35 | 97.2 |
| Yes | 1 | 2.8 |
| Total | 36 | 100.0 |



Graphical presentation of age distribution.

DISCUSSION

The pressure of preterm gestation on our health system raises and is important. Interventions have not proven effective so far to reduce the preterm birth rate. In reality, worldwide preterm birth rates increase. It is to this issue that we are unable to thoroughly understand preterm birth mechanisms.^[2] This study was done to highlight the effects of preterm labor in multiple gestation. In this study, all the patients who had preterm labor at 34+ weeks with twin pregnancies were included. The results showed that preterm labor did not affect patients with twin pregnancies much. Among 36 patients, membrane rupture occurred in 10 patients. Preeclampsia was seen in 6, IUGR in 4 and placental abruption was seen in 1 patient. Upon detecting, it was noticed that some unknown causes were also responsible for preterm labor. Because this study was done by Ultrasound, these unknown causes were not detected by ultrasonography.

Informed Consent: Written information was obtained from the participants of this study.

Financial Disclosure: The authors declared that this study received no financial support.

Inclusion Criteria: All female patients at late preterm pregnancy with normal and boarder line oligohydramnios.

Patients' consent: Written informed consents were obtained from the patients to publish the data concerning this case.

Author's Contribution

All the authors in the study designed the research plan, performed experimental works, collected the required data and analyzed the data. All authors jointly prepared the manuscript, critically revised and finalized the manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest with present publication.

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