Perinatal Outcome in High Risk Pregnancies

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ABSTRACT

Objective: To determine the perinatal outcome of high risk pregnancies, in terms of perinatal mortality, still birth, early neonatal death, apgar score and birth weight.
Study Design: Descriptive case series.
Place and Duration of Study: Department of Obstetrics & Gynaecology and Obstetrics Unit II, Jinnah Medical and Dental College, Karachi from April 2019 to September 2019.
Methodology: Two hundred and eighty seven patients with high risk pregnancies were included. The demographic information like maternal age, gestational age, parity and perinatal outcome were recorded. Perinatal outcome was assessed in terms perinatal mortality, still birth, early neonatal death. Following delivery Apgar score was noted at 5 min and birth weight was measured.
Results: The mean maternal age and mean gestational age were 32.56±3.91 years and 34.78±3.05 weeks respectively. The high risk pregnancies was found to be perinatal mortality 30 (10.5%), still birth 33 (11.5%), early neonatal death 27 (9.4%), Apgar score <7 at 5 min 20 (7%) and birth weight <2.5 kg 24 (8.4%) respectively.
Conclusion: The high perinatal mortality rate and associated with adverse outcome were found.
Key words: High risk pregnancies, perinatal mortality, still birth, early neonatal death, Apgar score and birth weight.

INTRODUCTION

Pakistan is a developing country which has limited resources and is extremely high maternal and perinatal.[1] Set at more than 7% of Pakistani women, mainly from rural areas, do not receive antenatal treatment, which contributes directly towards the adverse outcome of the perinatal disease.[2] The achievement of the Millennium Development Goals (MDGs) remains a hope and the perinatal mortality ratio (PNMR) MDG-4 should be decreased.[3] Two thirds of the deaths in neonates occur within the first week of existence.

Pregnancy is described as high risk when complicating one or more medical or obstetrical complications and is more likely than the occurrence of this outcome in the general population to lead to a negative outcome for women or their children.[4] A prenatal care of low-risk women is primarily aimed at providing advice and help for women and their children, as well as minor issues with their families. These goals are still applicable in high risk women, but the key goal is to avoid, identify and control these problems and factors that affect maternal or /or baby health.[5,6]

Perinatal mortality is a delicate standard measure of treatment given to and for pregnant women. Approximately 2/3 of newborn death occurs in the first week of life and within 1st hour of delivery, these two thirds are registered. The key determinants that contribute to foetal or neonatal death are complications of pregnancy, work and neonatal cycles. Sixty eight percent of births occur in home environments and mortality are not reported in countries like Pakistan. Current estimates for perinatal mortality can be higher because births and deaths in rural areas are not reported on a regular basis. The present research aims to assess perinatal outcomes of high-risk pregnancies in our population in perinatal mortality, still birth, early neonatal death, Apgar score and weight of birth in the sense of a local perspective as local data is poorly transmitted to health authorities.[6,7]

MATERIAL AND METHODS

This descriptive/case series study was conducted at Department of Obstetrics & Gynaecology and Obstetrics Unit II, Jinnah Medical and Dental College, Karachi from April 2019 to September 2019. A total of 287 high risk pregnant women with gestational age >24 weeks were included in this study. Patient's ages were 20 to 40 years. Patient's detailed demographics including age, gestational age and parity were recorded after taking informed written consent. Patients with gestational age <24 weeks, Patients with stroke, renal impairment and chronic obstructive pulmonary disease, chronic liver disease, multiple gestations, congenital anomaly and CCF were excluded. Perinatal outcome will be assessed in terms perinatal mortality, still birth, early neonatal death. Following delivery Apgar score will be noted at 5 min and birth weight will be measured. Data will be analyzed on SPSS Version 24.

RESULTS

There were 107 (37.3%) in 21-30 years and 180 (62.7%) 31-40 years with mean maternal age was 32.56±3.91 years. Forty two (14.6%) patients belonged to 24-31 weeks, 105 (36.6%) patients belong to 32-36 weeks and 140 (48.8%) in 37-42 weeks with mean gestational age was 32.56±3.91 weeks. Forty nine (17.1%) having parity 0-1, 89 (31%) having parity 2-4 and 149 (51.9%) having parity >4. Thirty (10.5%) had perinatal mortality and 257 (89.5%) did not have perinatal mortality. Thirty three (11.5%) were still born and 254 (88.5%) were not still born. Twenty seven (9.4%) had early neonatal death and 260 (90.6%) had no early neonatal death. Twenty (7%) had

APGAR score <7 at 5 minutes and 267 (93%) did not have APGAR score <7 at 5 minutes. Twenty four (8.4%) had birth weight <2.5 kg and 263 (91.6%) did not have birth weight <2.5 kg (Table 1).

When maternal age compared with perinatal mortality showed that 10 (9.3%) and 20 (11.1%) in the maternal age group 21-30 and 31-40 had perinatal mortality, no significant difference was observed with p-value >0.05. 07 (6.5%) and 26 (14.4%) in the maternal age group 21-30 and 31-40 were still born. With respect to early neonatal death showed that 06 (5.6%) and 21 (11.7%) in the maternal age group 21-30 and 31-40 had early neonatal, 08 (7.5%) and 12 (6.7%) in the maternal age group 21-30 and 31-40 had APGAR score <7 at 5 min respectively, no association was observed with p-value >0.05 and with respect to birth weight showed that 06 (5.6%) and 18 (10%) in the maternal age group 21-30 and 31-40 had birth weight <2.5 kg, p-value 0.13 (Table 2).

Table 1: Demographic information of the patients (n=287)

Variable	No.	%
Maternal age (years)		
21 – 30	170	37.3
31 – 40	180	62.7
Parity		
0 – 1	49	17.1
2- 4	89	31.0
> 4	149	51.9
Perinatal Mortality		
Yes	30	10.5
No	257	89.5
Still Birth		
Yes	33	11.5
No	254	88.5
Early Neonatal Death		
Yes	27	9.4
No	260	90.6
APGAR score		
Yes	20	7.0
No	267	93.0
Birth Weight		
Yes	24	8.4
No	263	91.6

Table 2: Comparison of maternal age according to perinatal outcome

Perinatal outcome	Age (years)		P-value
	21-30	31-40	
Perinatal mortality	10 (9.3%)	20 (11.1%)	0.39
Still birth	07 (6.5%)	26 (14.4%)	0.03
Early neonatal death	06 (5.6%)	21 (11.7%)	0.06
Apgar Score at 5 mint	08 (7.5%)	12 (6.7%)	0.48
Birth Weight	06 (5.6%)	18 (10%)	0.13

DISCUSSION

Perinatal mortality (PNM) is the foetal or neonate death and the foundation for calculating the PNM rate. It is considered a foetal death from 24 completed weeks of gestation to 7 days of life in or outside the uterus. It includes all fatalities, mortality and early neonatal deaths in intrauterine life. Perinatal mortality per 1000 live births is reported. Globally, some 130 million babies are born each year, 4 million are already born within the first four weeks and 3.3 million are born.[8] Annually there are some 5.3 million births in Pakistan, 2,70,000 newborns of which are dead. The high mortality rate of perinatals in the United States is 10 times higher. Our analysis showed that in our sample the mean maternal age of 32.56±3.91 and mean gestational age was 34.78±3.05 weeks each. The result of 287 high-risk pregnancies in perinatal disease was found to be 30 (10.5%), 33 (11.5%), early-neonatal mortality 27 (9.4%), 5 minutes and 20 (7%) of Apgar and 24 kg (8.4%) of birth weight respectively.

Among 500 women, 357 (71%) were high-risk and 143 (29%) low-risk. The high-risk group consisted of 164 (33 percent) non reserved women. The rate of LSCS was 30%, while 23 perinatal deaths occurred and 18 (78%) of the 23 deaths perinatally occurred in women without reservation. In the low-risk category, neonatal morbidity was 4% versus 2%. Complications intrapartum were 21% at high risk and 12% at low risk. In comparison to just 5 percent in low risk, 16 percent of high risk women deliver preterm.[9]

A total of 2224 perinatal deaths deliveries were analyzed. Of this number, a PNMR of 100.7/1000 births was replaced by 224 perinatal deaths. 196 SBs and 28 ENNDs were in life. Of these, 88% of women have not been booked. The main risk factors are antepartum haemorrhage (27.67%), followed by hypertensive (23.21%) and work-related mechanical (14.28%). In 9.8% of PNDs, congenital defects were observed and in 6.25% maternal medical disorders. In 3.5%, neonatal septicaemia and chorioamnionitis were the underlying factor, and in only 02 cases (0.89%) multiple embryos were found. However, no cause was found in 32 (14.28%) cases.[10]

The perinatal mortality rate for 92/1.000 living births was 498 perinatal deaths. Of these females, 11.2% were reserved and 88.7% unreserved. Perinatal maternal mortality rate < 20 years of age was 9.4%, 21-30 years 44.9%, 31-40 years 39.95%, and > 40% 5.6%. Primipara has 26.7% death, para 2-5 have 42.9% and para > 5 have been 30.3%. The age of the gestation was 40.3%, 33-36 weeks, 31.7% and 37-42 weeks, 28.5%. As far as deaths are concerned, 21.8% were the product of antiparty haemorrhage, 20.4% were hypertensive, 18% were mechanical, 14.4% congenital, 12.8% were neonatal, 5% were mothers and 8.4% were not explained.[11]

A total of 11260 perinatal mortality patients were examined. 740 perinatal deaths resulted in a rate of 65.7/1000 total births of perinatal mortality (PNMR). 605 SBs and 135 ENNDS were in life. Of the 88% of the population, there are no reservations. Anterior haemorrhage (APH) (29.7%) was the most common risk factor, followed by hypertension pregnancy disorders (PIH) (26.7%) and labor-related mechanical factors (14.5%). 10 percent congenital defects were identified while 4.5 percent were found with maternal medical disorders. But the cause remained unexplained in 5.6 percent of the cases.[12]

Due to poor maternal health, lack of sufficient prenatal, intranatal, and postnatal treatment, perinatal mortality is still large. Improving public health literacy, mothers' health status, socio-economic status, alphabet rates and sufficient peripartum care will prevent many perinatal deaths.

CONCLUSION

Perinatal mortality is primarily the product of poor motherly health, low socio-economic status, a lack of information on health, and inadequate care during pre-parties, intrapartums, and postparts during which almost anyone can recognise, manage and avoid obstetrical risk factors. This research contrasts the high perinatal mortality rate with that in other institutions and has a negative impact. Saving perinatal deaths is a way of ensuring secure maternal facilities such as antenatal treatment, clean and healthy childbirth and emergency obstetric and neonatal care at women's door. This can be accomplished by reinforcing the components of health education and home-based treatment by current services of lady health workers, women's health visitors and conventional birth attendants.

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