

COMPARISON OF MATERNAL OUTCOME IN BOOKED AND UNBOOKED MOTHERS DELIVERED IN SHEIKH ZAYED HOSPITAL, RAHIM YAR KHAN

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ABSTRACT

Background: All pregnant women, by virtue of their pregnancy status, face some level of maternal risk. There are certain complications related to some pregnancies which are mainly associated with the health of mother. **Objective:** To enlist the risk factors and maternal outcome among booked and unbooked cases. **Methodology:** This was a cross sectional study done from 1st January to 31st March 2017. Randomly selected 300 study subjects participants were included in this study, from Obstetrics and Gynecology departments of Sheikh Zayed Hospital, Rahim Yar Khan. All the patients admitted through emergency and outpatient department, who had delivered in labour room were included. Ethical approval was sought from Institutional Review Board and took consent from individual patients. Booked patients were those who has atleast three antenatal care visits while unbooked patients included the ones who couldn't have any antenatal care during whole period of pregnancy. A predesigned performa was used for data collection. The performa included booking status, age of both partners, education of both partners, occupation of both partners, monthly income, residence, ethnicity, mode of delivery, number of antenatal visits, health provider at the time of antenatal visits gravida, parity, abortion, mode of delivery, gestational age, history of any disease during pregnancy and maternal consequences. The data was analyzed using SPSS version 16. **Results:** The mean age of patients was 26±7.5 years, mean age of husbands was 30±6years, parity was 1.6±2.2, gravida was 3±2.4, abortion was 0.4±0.7, gestational age was 37.9±2.2, number of antenatal visits were 4±2.6, monthly family income (PKR) (Median) was 12000. 146 (48.7%) patients were illiterate. Out of total, 98 (32.7%) were booked patients and 202 (6.3%) were unbooked patients. Among booked cases, 84 (85.7%) were healthy, 7 (7.1%) has PPH, 2 (2%) were in ICU, 2 (2%) has ARF, 3 (3.1%) has hysterectomy. Among unbooked cases, 158 (78.2%) were healthy, 14 (6.9%) has PPH, 27 (13.4%) were admitted in ICU and 2 (1%) has hysterectomy. (p=0.00) **Conclusion:** Our study showed that PPH and ICU admissions were significantly more among unbooked cases at tertiary care hospital. Overall ICU admissions followed by PPH and hysterectomy were more common maternal outcome noted in this study.

Keywords: Maternal, Outcome, PPH, Complications

INTRODUCTION

Pregnancy itself is normal physiological condition and not a high-risk condition, however, the duration around delivery and the postnatal period is a very dangerous time period for both the mother and neonate.¹ Although, mostly the end result of pregnancy is healthful but some of the pregnancies are often intricate which may neither be good for the health of mother nor fetus. Therefore, a healthy healthcare system is necessary for better end result of both maternal and fetal health.^{1,2} According to statistical records, more than 5 million females go through pregnancy every year and 0.7 million (15% of all pregnant women) among them are expected to go through certain complications.² Perinatal consequences can be markedly improved by prior diagnosis of any complication and by providing special health care to the females with high risk pregnancies.³ With the provision of proper health care during the period of pregnancy, childbirth and later on, certain complications related to mother such as morbidity and mortality can be suppressed.⁴ Caesarean Section (CS) is one of the most important surgical operations to intercept

poor obstetric sequel and to save the lives of both mother and fetus.⁵ The maternal morbidity outcome indicator (MMOI) is an important indicator to evaluate the serious outcomes regarding childbirth.^{6,7,8} It is an important measure of severe consequences such as hysterectomy, renal failure rather than temporary problems such as haemorrhage and preeclampsia. Statistical data doesn't have the clinical specificities to make concluding remarks. Many countries with poor consequences have developed inadequate improvement.⁹ The Pakistan Demographic and Health Survey (PDHS) 2012-13 outlines a perinatal mortality rate of 75 per 1000 pregnancies and neonatal mortality rate of 55 per 1,000 live births.¹⁰ Several factors play a significant role to augment poor maternal consequences, these factors include lack of women education, increased population growth rate, poor healthcare system and poverty.¹¹⁻¹⁵ The objective of this study was to enlist the risk factors and maternal outcome among booked and unbooked cases.

METHODOLOGY

It was cross sectional study was conducted during

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the time span from 1st January to 31st March 2017. Randomly selected 300 participants were included in this study from Obstetrics and Gynecology departments of Sheikh Zayed Hospital, which is a tertiary care hospital where majority of patients are referred from periphery, other districts, private clinics and government hospitals. All the patients admitted through emergency and outpatient department, who had delivered in labour room were included. This was an observational study and ethical approval was sought Institutional Review Board and took consent from individual patients. Booked patients were those who had atleast three antenatal care visits while unbooked patients included the one's who didn't have any antenatal care during pregnancy.

A predesigned performa was used for data collection. All data was collected by gaining information from the participants. The performa comprised of data on booking status, age of both partners, education of both partners, occupation of both partners, monthly income, residence, ethnicity, mode of delivery, no of antenatal visits, health provider at the time of antenatal visits, no of mobiles at home, gravida, parity, abortion, mode of delivery, gestational age, history of any disease during pregnancy, indication of c-section and maternal complications.

The data was analyzed using SPSS version 16. Quantitative variables such as gestational age at delivery were calculated by mean and standard deviation and qualitative variables such as preterm birth, cesarean section rate was analyzed by calculating frequency and percentages. Statistical significance was calculated by chi-square test and p value of less than 0.05 was taken as significant.

RESULTS

The mean age of patients was 26±7.5 years, mean age of husbands 30±6 years, parity 1.6±2.2, gravida 3±2.4, abortion 0.4±0.7, gestational age 37.9±2.2, No of antenatal visits 4±2.6, and monthly family income (PKR)(Median) was 12000. Mean house distance from hospital was 32.5±44.5. Table I shows that 146 (48.7%) patients were illiterate, 80 (26.7%) has primary education, 34 (11.3%) had matric education and 40 (13.3%) has Fsc and above education. In this study, 125 (41.7%) husband were illiterate, 66

(22.7%) has primary education, 58(19.3%) has Matriculation, 49 (16.3%) has Fsc and above education. Out of total 98 (32.7%) were booked patients and 202 (6.3%) were unbooked patients and 13(4.3%) were checked by Dai,61(20.3%) checked by LHW, 215 (71.6%) checked by doctor, 27 (9%) had no care. In this study, 92 (30.7%)has SVD, 205 (68.3%) has C-section and 3 (1%) has instrumental delivery. Regarding indications of cesarean section, 71 (23.6%) has previous c-section, 59(19.6%) has obstructed labour, 117(39%) has fetal distress, 27 (9%) has malpresentation, 24 (8%) has eclampsia. 21 (4%) has APH and 21 (7%) has placenta previa. Table II shows that among booked cases , 84 (85.7%) were healthy, 7 (7.1%) has PPH, 2 (2%) were admitted in ICU, 2 (2%) has ARF, 3 (3.1%) has hysterectomy. Among unbooked cases, 158(78.2%) were healthy, 14 (6.9%) had PPH,27 (13.4%) were in ICU and 2 (1%) had hysterectomy. (p=.00) (Table II)

Table I: Frequency of risk factors among study subjects

Variable	No (%)	Variables	Value
Patient education	Illiterate	Occupation of Patient	House wife
	Primary		Labourer
	Matric		Other job
	FSC and above		Farmer
Husband education	Illiterate	Occupation of Husband	Labourer
	Primary		Other job
	Matric		Rural
	FSC and above		Urban
Booking status	Booked	Residence	Panjabi
	Unbooked		Balochi
Health care provider at time of visits	Dai	Ethnicity	Sindhi
	LHW		Saraiki
	Doctor		Other
	No care		SVD
		Mode of Delivery	C-section
			Instrumental

Table II: Comparison of maternal outcomes between booked and unbooked mothers

Variable	No (%)	Variable	No (%)
Healthy	84 (85.7%)	Healthy	158 (78.2%)
PPH	7 (7.1%)	PPH	14 (6.9%)
ICU	2 (2%)	ICU	27 (13.4%)
ARF	2 (2%)	ARF	0 (0%)
Hysterectomy	3 (3.1%)	Hysterectomy	2 (1%)

DISCUSSION

This study was conducted to assess maternal complications among mothers delivery at a tertiary care hospital. In our study, mean age of patients was 26 ± 7.5 years and mean age of husbands was 30 ± 6 years. This age range coincides with other studies.¹⁶⁻¹⁸ According to previous studies, mother's age is one of the most important factors related with cesarean deliveries,¹⁸⁻²⁰ which may be related to several complications experienced by older women during pregnancy period including diabetes, hypertension and pre-eclampsia. In our study, parity was 1.6 ± 2.2 and gravida was 3 ± 2.4 . Socio-demographic details of our study shows low socio-economis status, lack of education and lack of antenatal care. These all factor influence maternal outcome and pregnancy. It sets a vicious circle of poor pregnancy outcome complications morbidity and mortality.¹⁸

According to our study majority of people live in rural area so they have lack of advance medical facility, illiterate and have monthly family income of (median) (PKR) 12000. Illiteracy and poverty are the major vices of our society impeding our patients for registration, thus both contribute to poor antenatal care.¹⁹ Whereas illiteracy is more important and lack of mother's education is associated with a decrease in antenatal care.^{20,21}

Our study shows that mean distance of house distance from SZH is 32.5 ± 44.5 . Distance from hospital too had an effect on outcomes where even booked mothers reached hospital in late second stage of labour.²² Our study shows that there is high ratio of C-section as compare to SVD and very low incidence of instrumental delivery. During past few years an increase in global Caesarian section rates was observed.^{23,24} In the year 2008 W.H.O conducted a survey across 24 countries on the basis of 373 facilities. From this survey they came to the conclusion that non essential CS causes a significant increase in the possibility of several complications.²⁵

In our study, indication of C-section: 71 (23.6%) has previous c-section, 59 (19.6%) has obstructed labour, 117 (39%) had fetal distess, 27 (9%) had malpresentation, 24(8%)had eclampsia. 21(4%) had APH, 21(7%) had placenta previa, 92 (30.7%) had no previous c-section. This shows that fetal distress is the major indication of Caesarian

section. Diagnosis of fetal distress is based on foetal heart monitoring and meconium. This is in part due to more advanced technology and equipment. It has been a remarkable indicator for caesarean section.²⁵ Obstructed labour (16.1%); Prior history of caesarean section is also a significant cause of this procedure; therefore to decrease the significantly higher rates of caesarian section it is needed to perform vaginal deliveries even after previous history of Caesarian section; on trial basis.²⁶ This is one of the most troublesome issues in our country common, mostly because of mismanagement by birth attendants, subtle use of oxytocic drugs or prostaglandins.²⁷

In the grand multiparous population vaginal deliveries has not been associated with an increased risk of a complications in contrast with repeated caesarean section.²⁸ Breech presentation is one of the most important causes of several complications regarding maternal morbidity or mortality regardless irrespective of route of delivery. But, vaginal delivery for term breech does not elevate the risk of complications, if there is proper selection for the case. However, there has been a significant elevation in the rate of caesarian sections related to breach presentation, as most obstetricians think that it is easy and safe than giving a trial of labour. So this is the most significant cause of increase in elective caesarean section for breech.²⁹

Our study shows that among booked cases, 84 (85.7%) were healthy, 7 (7.1%) had PPH, 2 (2%) were in ICU, 2 (2%) had ARF, 3(3.1%) had hysterectomy, and among unbooked cases, 158(78.2%) were healthy, 14(6.9%) had PPH, 27 (13.4%) were in ICU, and 2(1%) had hysterectomy. ($p=.00$) This shows that PPH is the most common morbidity among booked cases. According to this study there is increase admission rate in ICU among unbooked cases. The reason may be women developed complications during labour and puerperium.

Because of poor utilization of prenatal care as one of the contributing factors also late referral from primary health centre, or, failure to approach a health facility for emergency obstetrical care leads to the high obstetric mortality and morbidity. Lack of prenatal care was were found having increased perinatal morbidity and mortality. In our setup, unbooked patients at a higher risk requiring proper evaluation and management. The common indications of ICU admissions were hypertensive

disease of pregnancy. patients that were admitted were referred and not booked. Such patients had higher SAPS II score at the time of admission probably due to lack of protocolled care for sepsis in non institutional setup.³⁰

CONCLUSION

Our study showed that post partum hemorrhage and ICU admissions were significantly more among unbooked cases at tertiary care hospital. ICU admissions followed by PPH and hysterectomy were more common maternal outcome noted in this study. This study also shows that sociodemographic background of pregnant women plays a major role in determining their choice of opting for an antenatal care or not.

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