



Obstetric Morbidity Associated With Utilization and Non-Utilization of Prenatal Care

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ABSTRACT

Objective: This study was conducted to determine maternal morbidity associated with utilization and non utilization of prenatal care among pregnant ladies.

Study design and Duration: It is a case control type of study. This study was started in January 2017 and completed in December 2017 comprising on 12 months of duration.

Setting: This study was conducted in gynaecology and obstetrics ward of Shifa International Hospital Islamabad Pakistan.

Patients and Methods: In this study 230 cases were studied. These were pregnant ladies in different gestational ages. These females were divided into two groups. All the females who were taking proper prenatal care were kept in group-A (booked) and those not taking prenatal care were kept in Group-B (non-booked). There were 120 females in group-A and 110 in group-B. Morbidity associated with pregnancy was studied in both groups and was compared with each other. These females were reported in OPD and they were used to call for regular follow-up and any they were examined for any pregnancy related morbidity or complications. These females were admitted in the ward for delivery 4-7 days prior to expected date of delivery. Necessary investigations were carried out in case of any emergency for cesarean section and anesthesia fitness was also taken for all patients in the study group. A proforma was designed to list pregnancy related complications of each case in the study group such as pre-eclampsia, eclampsia, hemorrhage, abortion and preterm, full term or post term birth. Any complication occurring intra partum or post partum was also recorded. Consent was taken from all the cases and also from the in charge of the ward for conducting study. All data was analyzed using Microsoft office and SPSS version 2007. Results were calculated in the form of frequencies and expressed via tables and graphs.

Results: There were total 230 cases in this study, 120 cases in group-A (booked group) and 110 were in group-B (non-booked). These females were in different ages. In booked group ages of females were 15-25 years in 30 cases, 80 females between age 26-35 years and 10 females were above 35 years of age. In non-booked group 17 females were between 15-25 years, 75 were between 26-35 years and 18 were above 35 years of age. In booked group 38 females were primary gravid, 42 were having 1-2 children, 23 were having 3-4 children and 17 females had more than 4 children. Similarly in non booked group 39 females were primary gravid, 34 had 1-2 children, 25 females had 3-4 children and 12 females had more than 4 children. Mode of admission was via OPD in 70 cases and via emergency in 50 cases in booked group and 20 via OPD and 90 via emergency department in non booked group. In booked group 16 females gave birth to child in gestational age less than 38 weeks, 74 females had gestational age 38-40 weeks, 21 with gestational age 41-42 weeks and 9 cases with gestational age more than 42 weeks. In non booked group 30 females had gestational age less than 38 weeks, 49 had G.A 38-40 weeks, 20 females with G.A 41-42 weeks and 10 females had gestational age more than 42 weeks.

Conclusion: Proper use of prenatal care is associated with less morbidity and relatively safe delivery with minimum complications while non-utilization of prenatal care is associated with increased morbidity and mortality associated with pregnancy and poor maternal and fetal outcome. Health education in mothers and regular follow-up in pregnancy leads to healthy mother and child with full term birth.

Key Words: Perinatal morbidity, Maternal outcome, fetal outcome, prenatal care, maternal mortality

INTRODUCTION

During pregnancy mother and fetus require proper care and monitoring for preventing any complication. In Pakistan maternal mortality rate is much high as compared to other countries of the world. According to a report maternal mortality rate in Pakistan is 35 per hundred thousand live births and 100 per thousand total births that is a very high number.¹ In our country although health system is being developed more better but still due

to maximum population in rural areas these people are not getting proper health care services. Health services are much better in the city and easily available but in rural areas these services are difficult to utilize. There is low literacy rate and false beliefs related to the pregnancy common among the people living in rural areas that is also a big reason of non-utilization of these services by rural areas.² Lack of health education among females is a major cause of high maternal mortality



and perinatal mortality rate. Complications during pregnancy if addressed in time can be prevented and life of mother and fetus can be saved but mostly females don't know that they have such problem or if they know it then go to quakes. In this way morbidity increases and a minor problem becomes life threatening to mother or fetus.³ In this study we emphasized on the importance of prenatal care. In this study 230 cases were studied. These were pregnant ladies in different gestational ages. These females were divided into two groups. All the females who were taking proper prenatal care were kept in group-A (booked) and those not taking prenatal care were kept in Group-B (non-booked). There were 120 females in group-A and 110 in group-B. Morbidity associated with pregnancy was studied in both groups and was compared with each other.⁴ These females were reported in OPD and they were used to call for regular follow-up and any they were examined for any pregnancy related morbidity or complications. These females were admitted in the ward for delivery 4-7 days prior to expected date of delivery. In our country although health system is being developed more better but still due to maximum population in rural areas these people are not getting proper health care services.^{5,6} Health services are much better in the city and easily available but in rural areas these services are difficult to utilize. There is low literacy rate and false believes related to the pregnancy common among the people living in rural areas that is also a big reason of non-utilization of these services by rural areas. Lack of health education among females is a major cause of high maternal mortality and perinatal mortality rate.⁷ A proforma was designed to list pregnancy related complications of each case in the study group such as pre-eclampsia, eclampsia, hemorrhage, abortion and preterm, full term or post term birth. Any complication occurring intra partum or post partum was also recorded. Consent was taken from all the cases and also from the in charge of the ward for conducting study. All data was analyzed using Microsoft office and SPSS version 2007. Results were calculated in the form of frequencies and expressed via tables and graphs. According to studies done in well developed countries maternal mortality rate in United Kingdom is 12 per thousand live births and 7.1 in Nether land and 3.8 in Scotland per thousand live births.⁸⁻¹⁰

Patients and Methods

This is a case control study conducted in a tertiary care teaching hospital. This study was completed in one year duration. In this study 230 cases were studied. These were pregnant ladies in different

gestational ages. These females were divided into two groups. All the females who were taking proper prenatal care were kept in group-A (booked) and those not taking prenatal care were kept in Group-B (non-booked). There were 120 females in group-A and 110 in group-B. Morbidity associated with pregnancy was studied in both groups and was compared with each other. These females were reported in OPD and they were used to call for regular follow-up and any they were examined for any pregnancy related morbidity or complications. These females were admitted in the ward for delivery 4-7 days prior to expected date of delivery. Necessary investigations were carried out in case of any emergency for cesarean section and anesthesia fitness was also taken for all patients in the study group. A proforma was designed to list pregnancy related complications of each case in the study group such as pre-eclampsia, eclampsia, hemorrhage, abortion and preterm, full term or post term birth. Any complication occurring intra partum or post partum was also recorded. Consent was taken from all the cases and also from the in charge of the ward for conducting study. All data was analyzed using Microsoft office and SPSS version 2007. Results were calculated in the form of frequencies and expressed via tables and graphs. There was an inclusion and exclusion criteria for patients. According to inclusion criteria all those pregnant females were included which were in labour, a pregnant lady delivered in the study institution and which ladies delivered in the study institution and then readmitted due to some complications. All those cases were excluded which were admit in the hospital due to antenatal complications. Complications related to labor such as obstructed labor, hemorrhage, still birth, puerperal sepsis, thrombo-embolism and pre-eclampsia and eclampsia all were recorded. Condition of new born was assessed and premature babies or babies with respiratory distress were retained in the NICU.

Results

There were total 230 cases which were included in the study according to inclusion criteria, 120 cases in group-A (booked group) and 110 were in group-B (non-booked). These females were in different ages. In booked group ages of females were 15-25 years in 30(25%) cases, 80(66.7%) females between age 26-35 years and 10(8.3%) females were above 35 years of age. In non-booked group 17(15.45%) females were between 15-25 years, 75(68.2%) were between 26-35 years and 18(16.4%) were above 35 years of age. In booked group 38(31.7%) females were primary gravid, 42(35%) were having 1-2 children, 23(19.2%) were

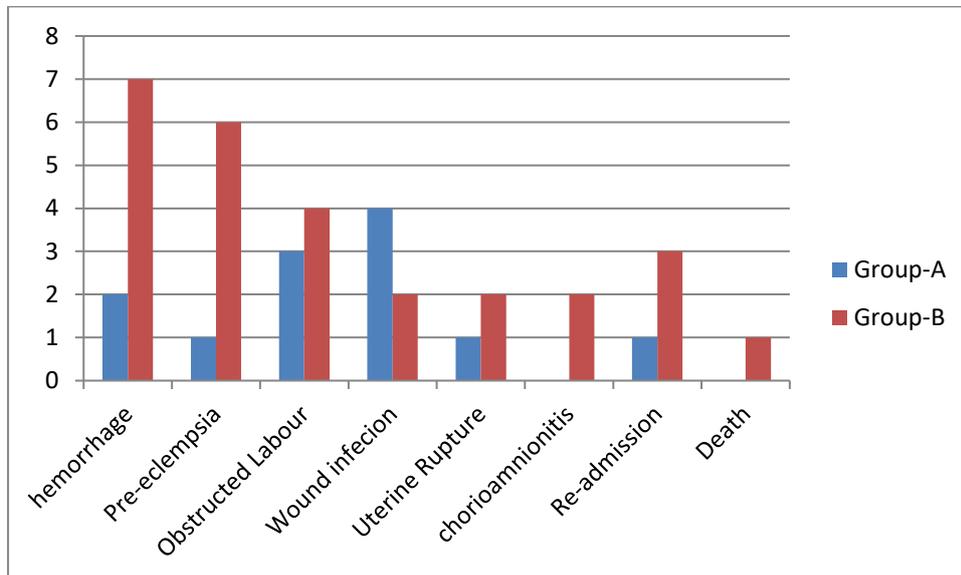


having 3-4 children and 17(14.2%) females had more than 4 children. Similarly in non booked group 39(35.45%) females were primary gravid, 34(30.9%) had 1-2 children, 25(22.7%) females had 3-4 children and 12(10.9%) females had more than 4 children. Mode of admission was via OPD in 70(58.3%) cases and via emergency in 50(41.7%) cases in booked group and 20(18.2%) via OPD and 90(81.8%) via emergency department in non booked group. In booked group 16(13.3%)

females gave birth to child in gestational age less than 38 weeks, 74(61.7%) females had gestational age 38-40 weeks, 21(17.5%) with gestational age 41-42 weeks and 9(7.5%) cases with gestational age more than 42 weeks. In non booked group 30(27.3%) females had gestational age less than 38 weeks, 49(44.5%) had G.A 38-40 weeks, 20(18.2%) females with G.A 41-42 weeks and 11(10%) females had gestational age more than 42 weeks.

(Table-1) Characteristics of patients in Group-A and Group-B

Age of Patients (years)	Booked patients (group-A)		Non-Booked patients (group-B)	
	n	%	n	%
15-25	30	25%	17	15.45
26-35	80	66.7%	75	68.2
Above 35	10	8.3	18	16.4
Parity				
Primary gravid	38	31.7	39	34.45
1-2	42	35	34	30.9
3-4	23	19.2	25	22.7
More than 4	17	14.2	12	10.9
Mode of Admission				
OPD	70	58.3	20	18.2
Emergency	50	41.7	90	81.8



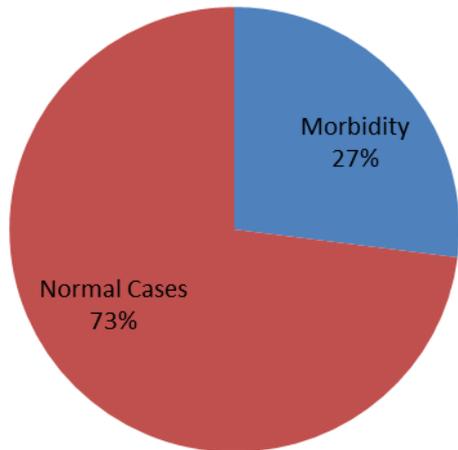
(Figure-1) Maternal Morbidity in Group-A (n=120) and Group-B (n=110)

Gestational age (weeks)	Booked Patients		Non-Booked patients	
	n	%	n	%
Less than 38	16	13.3	30	27.3
38-40	74	61.7	49	44.5
41-42	21	17.5	20	18.2
Above 42	9	7.5	11	10

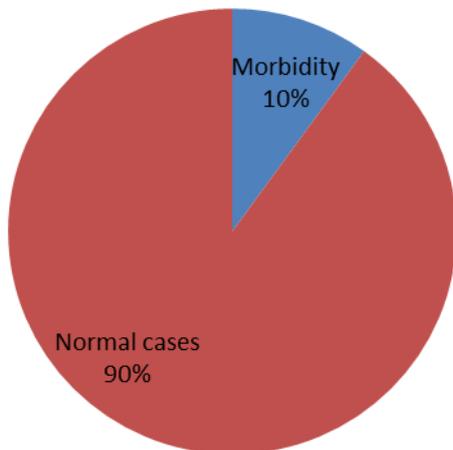


Perinatal mortality	Booked Patients (n=120)		Non-Booked Patients (n=110)	
	N	%	N	%
Still birth	4	3.3	5	4.5
Intra uterine death	2	1.6	6	5.4
Early neonatal death	2	1.6	4	3.6
Total	8	6.6	15	13.6

(Figure-2) Morbidity in Booked cases (n=120)



(Figure-3) Morbidity in booked cases (n=120)



DISCUSSION

There are different obstetric morbidities but in this study those morbidities were studied which were measureable.¹¹ In our study maternal mortality and morbidity rate was comparatively lower than other developing countries. Many studies have been done in this aspect in the past but still more work is required in this field.¹² According to a study conducted in Nigeria maternal mortality rate and morbidity rate was higher in noon booked cases. In our study hemorrhage was common morbidity and it is similar to other studies done previously.¹³

According to a study done in Nigeria Puerperal sepsis was 71.2% more common in noon booked cases. During pregnancy mother and fetus require proper care and monitoring for preventing any complication. In Pakistan maternal mortality rate is much high as compared to other countries of the world. According to a report maternal mortality rate in Pakistan is 35 per hundred thousand live births and 100 per thousand total births that is a very high number.¹⁴ In our country although health system is being developed more better but still due to maximum population in rural areas these people are not getting proper health care services. Health services are much better in the city and easily available but in rural areas these services are difficult to utilize.¹⁵⁻¹⁷ There is low literacy rate and false believes related to the pregnancy common among the people living in rural areas that is also a big reason of non-utilization of these services by rural areas. Lack of health education among females is a major cause of high maternal mortality and perinatal mortality rate. Complications during pregnancy if addressed in time can be prevented and life of mother and fetus can be saved but mostly females don't know that they have such problem or if they know it then go to quakes.¹⁸ There were 120 females in group-A and 110 in group-B. Morbidity associated with pregnancy was studied in both groups and was compared with each other. These females were reported in OPD and they were used to call for regular follow-up and any they were examined for any pregnancy related morbidity or complications. These females were admitted in the ward for delivery 4-7 days prior to expected date of delivery. Necessary investigations were carried out in case of any emergency for cesarean section and anesthesia fitness was also taken for all patients in the study group. A proforma was designed to list pregnancy related complications of each case in the study group such as pre-eclampsia, eclampsia, hemorrhage, abortion and preterm, full term or post term birth. Any complication occurring intra partum or post partum was also recorded. Consent was taken from all the cases and also from the in charge of the ward for conducting study.¹⁹ All data was analyzed using Microsoft office and SPSS version 2007. Results were calculated in the form of frequencies and





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utilization of these services by rural areas. A study done by Jamal et al reported high perinatal mortality and morbidity in his study associated with poor utilization of prenatal care.²⁰

Conclusion

This study like previous studies has proved that lack of prenatal care leads to increased prenatal deaths Proper use of prenatal care is associated with less morbidity and relatively safe delivery with minimum complications while non-utilization of prenatal care is associated with increased morbidity and mortality associated with pregnancy and poor maternal and fetal outcome. Health education in mothers and regular follow-up in pregnancy leads to healthy mother and child with full term birth. Antenatal visits are of main importance for a normal pregnancy.

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