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Research Article

**A COMPARATIVE STUDY TO KNOW THE OBSTETRIC
MORBIDITY IN NON-BOOKED AND BOOKED PATIENTS**¹Dr. Saima Zaman, ²Dr. Qurat-ul-ain Hameed, ³Dr. Asma Asif Rana¹PSSHMC Hospital, Lahore²Govt M Nawaz Sharif Teaching Hospital Yakki Gate, Lahore³THQ Hospital Nowshera Virkan, Gujranwala**Abstract****Objective:** To analyze the differences in obstetric morbidity due to the use and non-use of prenatal care.**Study Design:** A case control Study.**Configuration and Duration:** In the Obstetrics and Gynecology Department of Services Hospital, Lahore for one year duration from July 2017 to July 2018.**Methodology:** All women admitted during labor and while puerperium. Details of all cases of complications occurring during the registration, including demographic information, pre-existing problems, postnatal complications and postnatal stay recorded in pre-designed form. APGAR score, weight and abnormality were determined in newborn. Pearson's chi-square test was used to determine the significance of morbidity difference in patients with booked and not non booked in Hospitals.**Results:** 735 women were included in the study and 47.2% of them were not booked. Fifteen patients presenting with postpartum complication were elsewhere. Six patients were re-admitted after discharge due to morbidity. The overall maternal morbidity rate was 8.2% and there was a significant difference between two groups ($p = 0.001$). The most common disease is the major hemorrhage and the most common found ($p = 0.003$). The total perinatal morbidity was 5.5%. In the study groups the difference was remarkable (0.001). 9.1%, the cases need ICU who were non-booked ($p = 0.000$) and 4% Newborn needs care in Booked cases.**Conclusion:** Abuse of prenatal care is associated with maternal and perinatal morbidity and mortality.**Key Words:** Prenatal care, birth morbidity, maternal morbidity, perinatal morbidity, Near Miss maternal mortality.**Corresponding author:****Dr. Saima Zaman,**

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INTRODUCTION:

The birth of a child is a rewarding event for most couples, but it can turn into a nightmare because of an unpredictable and potentially life-threatening complication. WHO / UNICEF estimated the maternal mortality rate in Pakistan at 340 / 100,000 live births and perinatal mortality rates at 90-100 / 1000 births. In addition to those who have died, thousands of women and their babies experience temporary or permanent disabilities due to complications during childbirth. Maternal morbidity has been proposed as an indicator to measure the level of obstetric care that is present in any population. The incidence of severe maternal morbidity varies globally. Population-based studies in developed countries have shown 12/1000 deliveries in the UK, 7.1 / 1000 deliveries in the Netherlands and 3.83 / 1000 deliveries in Scotland. There are few data on maternal morbidity in communities with limited health facilities. It is expected that 15% of pregnancies will develop complications. A study from Africa reported that the severity of severe obstetric morbidity was 3% to 9%, while a Nigerian study reported a prevalence of 14.1%. In an observational study of home births in rural India, 52.6% of women developed complications during childbirth and puerperium. Comparable data from Pakistan are lacking. In a study conducted on postpartum women, 53.3% of women reported some complications during or after delivery at a time when the socioeconomic environment in Pakistan was low. In the rural part of Hyderabad, a survey was conducted in which 38% of women experienced an obstetric complication in their last birth. International organizations have reported that abuse (less than 30%) of prenatal care is one of the factors contributing to high mortality and obstetric morbidity in Pakistan. Numerous studies in both developed and developing countries have shown an informal relationship between improving antenatal care and improving outcome of pregnancy. Gomez-Olmedo, Barros, Delvaux, and Swyer reported studies showing the relationship between prenatal care in developed countries and improvement in pregnancy outcome. Recent data has created a discussion about the actual impact of prenatal care on obstetric outcome. It has been suggested that many complications that threaten the mother's life could not be determined in the prenatal clinic.

MATERIALS AND METHODS:

This case control Study was held in the Obstetrics and Gynecology Department of Services Hospital,

Lahore for one year duration from July 2017 to July 2018.

Patients were selected according to the following criteria:

Participation criteria

1. All women of labor, regardless of age, gestational age, parity, reserve status and type of delivery.
2. All women are accepted by cesarean section.
3. Patients who were given remission during delivery or due to any complications in puerperium.
4. Patients were delivered to the study unit and read again with any complication during the puerperium.

Exclusion criteria

1. Pregnant women applied for prenatal complications.

Detailed history and physical examination of the patients were recorded in pre-designed proforma. Prenatal registry is reviewed. The patients were divided into two groups Booked and Non Booked "Booked" patients had more documented evidence than 3 prenatal or more visits with the last visit of the previous month. Those who did not meet these criteria were labeled as "non Booked" patients.

All the complications that occurred during the labor and postnatal hospital stay were recorded. The major morbidities were significant obstetric hemorrhage, severe preeclampsia obstructed action, uterine rupture, chorioamnionitis, congenital sepsis, wound infection, thromboembolism and pulmonary edema. APGAR score, weight and abnormality were determined in newborn. The patients who had congenital asphyxia applied to the Newborn Intensive Care Unit (NICU). Data were analyzed using input and SPSS 17. Chi-square test and 2 groups were analyzed using the importance of various morbidity differences.

RESULTS:

A total of 735 patients were included in the study. While 347 (47.2%) patients were not booked, 52.8% were booked. The mean age was 26.9 years in the booked group and 27 years in the non-booked group. The majority of patients were multifaceted and 38 weeks. 76.3% of the registered patients and 88.5% of the non-reserved patients were admitted to the emergency department. 0.8% and 4.3% of the non-booked patients had a poor management history by traditional obstetricians who were not educated before applying. Of the non-booked women, 66.5% and 74.4% were anemic and the mean hemoglobin was 10.01 g / dl and 9.68 g / dl, respectively (Table I).

Characteristics	Booked (n=388)		Non-Booked (n=347)		
	No. of Patients	%	No. of Patients	%	
Age (Years)	< 20	15	3.9	20	5.8
	20-35	367	94.6	309	89
	> 35	6	1.5	18	5.2
Parity	Primigravidae	109	28.1	97	28
	1-4	230	59.3	187	53.9
	> 4	49	12.6	63	18.2
Mode of Admission	OPD	92	23.7	40	11.5
	Emergency	296	76.3	307	88.5
Gestational Age (Weeks)	< 37	40	10.3	59	17
	37-42	343	88.4	279	80.4
	> 42	5	1.3	9	2.6
Mishandled by TBA (p=0.002)		3	0.8	15	4.3
Mode of Delivery	LSCS	114	29.4	81	23.3
	Vaginal	274	70.6	266	76.7
Delivered outside study unit		4	1	11	3.2
Mean Hb (g/dl)		10.01±1.58		9.68±1.69	

Table I. Characteristics of study patients (n=735)

Fifteen patients reported postpartum entries elsewhere and all with a complication. Six patients were taken back after being discharged with Morbidity. The frequency of maternal morbidity is shown in Table II.

Table II. Maternal Morbidity (8.2%), Total No. of patients =735

Indicator	Booked (n=388)		Non-Booked (n=347)		P-value
	No. of Patients	%	No. of Patients	%	
Any Morbidity	19	4.9	41	11.8	0.001
Major Haemorrhage	4	1	16	4.6	0.003
Severe Pre-Eclampsia	2	0.5	7	2	0.065
Obstructed Labour	2	0.5	7	2	0.065
Pelvis Sepsis	1	0.3	4	1.2	0.141
Wound Infection	7	1.8	6	1.7	0.939
Chorioamnionitis	1	0.3	1	0.3	0.937
Uterine rupture	1	0.3	1	0.3	0.937
Thromboembolism	1	0.3	--	--	0.344
Pulmonary Edema	--	--	1	0.3	0.290
Re-admission	2	0.5	4	1.2	0.372
Death	--	--	2	0.58	0.134

Overall maternal morbidity was 8.2%. Within the total number of booked cases, 4.9% of patients suffered from

more or more conditions, compared to 11.8% of the non-reserved group. The most common morbidity was major bleeding occurring in 1% of the group and 4.6% of the unregistered group. Two mothers died in the study period. Both were non-booked cases. The maternal mortality rate was 284 / 100,000 live births. Of the total mothers, 4% were neonates and 9.1% had NICU due to asphyxia at birth. 12.9% of separated babies and 21.2% of unprotected infants had a birth weight below normal (Table III).

Indicator	Booked (396)		Non-Booked (353)		P-value
	No. of Patients	%	No. of Patients	%	
Any Morbidity	11	2.8	30	8.5	0.001
Birth Asphyxia	16	4	32	9.1	0.000
All Low Birth Weight Babies	51	12.9	75	21.2	0.002
● Low Birth Weight	45	11.4	63	17.8	
● Very Low Birth Weight	6	1.5	7	2	
● Very Very Low Birth Weight	--	--	5	1.42	
Congenital Abnormality	3	0.8	6	1.7	0.237

Table III. Perinatal Morbidity (Total Births = 749)

Perinatal mortality was 1.8% in the cases with booked and 10.8% in the non-booked cases.

DISCUSSION:

There is no optimal definition of obstetric morbidity. Different studies have used various conditions to describe it. Objectively measurable / demonstrable obstetric complications during the hospital stay were selected. 52.8% of the total patient population received prenatal care, but 65.5% of them had anemia. This reflects poor compliance. The negative socioeconomic status of the population investigated. Maternal morbidity observed in this study is less than 15% estimated in developing countries. This may be due to the inability to follow up in postnatal follow-up after discharge from the hospital. Therefore, it is not possible to report some complications after discharge from the hospital. There was a significant difference in maternal morbidity among the patients who were booked and not booked. Other studies have found that prenatal care deficiency is associated with increased morbidity and mortality. A Nigerian researcher reported that 82.5% of severe acute maternal morbidity cases and 88.6% of maternal deaths occurred in non-reserved patients. The most common maternal morbidity observed in this study was major bleeding. This is consistent with other international and local studies, with an incidence of 7/1000 deliveries. The frequency of major bleeding was higher in non-reserved patients compared to the patients who were booked. In a rural study, <4 prenatal visits were found to be a risk factor for postpartum hemorrhage. Obstructive childbirth and severe preeclampsia were more common in Liu-compatible non-obstructed cases. Puerperal sepsis

was more frequent, but the frequency of wound infection and chorioamnionitis was almost equal in both groups. This is consistent with a Nigerian study presented by Dare that puerperal sepsis is 71.2% more common in non-reserved patients. Complications such as thromboembolism, uterine rupture and pulmonary edema are rare. One patient who was assigned to this study group developed iliofemoral thrombosis and mild pulmonary embolism during hospital stay to correct severe anemia. After an uncomplicated birth, she was transferred to the Medical Intensive Care Unit where she was discharged after improvement in symptoms. Deep venous thrombosis can be prevented during pregnancy by identifying high-risk conditions and prophylactic measures such as elastic compression stockings and heparin. The patient developed pulmonary edema and firstly came to the 4th elective cesarean section. She had a major postpartum hemorrhage requiring uterine-vaginal presentation and multiple blood transfusions. Massive bleeding is a well-known cause of non-cardiogenic pulmonary edema. A patient who had a previous cesarean section, a non-reserved, active birth was reported, and uterine rupture was detected when preparations were made for caesarean section. Ebiegbe has also reported that lack of antenatal care is a risk factor for uterine rupture. Additional factors such as not approaching a health center for emergency obstetric care also contribute to the morbidity observed with uterine scar separation in the second case. The woman who had a history of two previous cesarean

sections had regular prenatal visits, but did not report immediately after 33 weeks of spontaneous rupture of membranes. The most frequent reason for re-entry in the study unit was wound infection in both groups, whereas only post-non-hemorrhage was observed in patients who were not reserved. One of these patients required emergency obstetric hysterectomy. Both mothers who died during the study period were not reserved. The cause of death was massive pulmonary embolism in one patient. The other was admitted with anemic heart failure and died due to a blood transfusion reaction. The incidence of asphyxia at birth and low birth weight were significantly higher in infants of non-reserve mothers, such as perinatal mortality rate. Lack of prenatal care was associated with a higher incidence of asphyxia at birth in a study in Hyderabad. Fatrakul reported a risk factor for prenatal care for hypoxic-ischemic encephalopathy in neonates. Lack of prenatal care was associated with an increase in perinatal morbidity and mortality in a US study. In his Islamabad study, Jamal reported high morbidity and neonatal mortality in mothers with prenatal care. Similarly, Adenkale, Ekwempu, Treacy and Sánchez-Nunico also reported a poor perinatal outcome associated with a lack of perinatal care.

CONCLUSION:

The results of this study showed that abuse of prenatal care was associated with an increase in maternal and perinatal morbidity and mortality.

REFERENCES:

1. Adhikary, Alpana, Anwara Begum, Fahmida Sharmin Joty, Nihar Ranjan Sarker, and Tahmina Akhter. "Pregnancy Outcome between Booked and Unbooked Cases in A Tertiary Level Hospital." *Journal of Shaheed Suhrawardy Medical College* 9, no. 2 (2018): 43-48.
2. Jahan, Raunak, Md Shahadat Hossain, Sultana Afroj Shila, Lutfa Begum Lipi, Zobaida Sultana Susan, and Sanjukta Chowdhury. "Study of Severe Acute Maternal Morbidity (SAMM) in A Tertiary Care Hospital." *Journal of Shaheed Suhrawardy Medical College* 8, no. 2 (2018): 58-62.
3. Yaqoob, Aisha, Farzana Kadri, and Tazeen Abbass. "The Outcome of Women with Severe Acute Maternal Morbidity (Near Miss) Attending Tertiary Care Hospital." *Journal of the Society of Obstetrics and Gynaecologists of Pakistan* 8, no. 2 (2018): 121-125.
4. Hasan, Aisha, Nadeem Iqbal, Muhammad Athar Khawaja, Arzu Yousuf, Afifa Masood, and Yashfeen Malik. "Managing a Large-Size Adrenal Cyst by Hand-Assisted Laparoscopic

Surgery in a Young Male." *Journal of the College of Physicians and Surgeons--Pakistan: JCPSP* 28, no. 3 (2018): S28-S30.

5. Akadri, Adebayo A., Kehinde M. Ogunsowo, and Oluseyi I. Odelola. "Abruptio Placenta: A retrospective analysis in a tertiary hospital, Sagamu, Nigeria." *Tropical Journal of Obstetrics and Gynaecology* 35, no. 2 (2018): 142-146.
6. Jain, Shaveta, Nitin Jain, Pushpa Dahiya, Seema Rohilla, Roopa Malik, and Vani Malhotra. "To Compare Perinatal Outcome In Registered (Booked) And Unregistered (Unbooked) Cases Of Placenta Previa: A Prospective Study." *The Indian Practitioner* 71, no. 8 (2018): 21-26.
7. Patel, Tejal, and Neha Makwana. "EMERGENCY PERIPARTUM HYSTERECTOMY-A RETROSPECTIVE STUDY IN A TERTIARY HEALTH CARE CENTER." *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH* 6, no. 7 (2018).
8. Rasheed, Mohd, Vivek Aggarwal, and Gunjan Rai. "Feto-Maternal Outcome of pregnancies complicated by low and intermediate risk heart disease at a peripheral hospital: Experience from a single centre." *INDIAN JOURNAL OF APPLIED RESEARCH* 7, no. 1 (2018).
9. Doddamani, Usha, Nirmala Rampure, Sanyogita Kulkarni, Shoba Patil, and Neelavati Tambre. "Emergency obstetric hysterectomy: a lifesaving procedure." *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* 7, no. 5 (2018): 1876-1879.
10. Akinlusi, Fatimat M., Kabiru A. Rabi, Idayat A. Durojaiye, Adeniyi A. Adewunmi, Tawaqualit A. Ottun, and Yusuf A. Oshodi. "Caesarean delivery-related blood transfusion: correlates in a tertiary hospital in Southwest Nigeria." *BMC pregnancy and childbirth* 18, no. 1 (2018): 24.
11. Ogu, R.N. and Alegbeleye, J.O., 2018. Improving maternal health: Women's attitude to antenatal care utilization is crucial. *Clin Obstet Gynecol Reprod Med [Internet]*. Available from: <http://www.oatext.com/improving-maternal-health-womens-attitudeto-antenatal-care-utilization-is-crucial.php>.
12. Singal, Neerja, Geetanjali Setia, Bal Krishan Taneja, and Kiran Kumar Singal. "Factors associated with maternal anaemia among pregnant women in rural India." *Bangladesh Journal of Medical Science* 17, no. 4 (2018): 583-592.
13. Mandat, Anirban, Dibakar Haidar, Nita Ray, Shib Sankar Murmu, and Debdulal Mandat. "OUTCOME OF TERM BREECH PRESENTATION IN A PERIPHERAL

- TERTIARY CARE CENTRE OF WEST BENGAL, INDIA." *Journal of Evolution of Medical and Dental Sciences* 7, no. 31 (2018): 3476-3481.
14. Munir, S.I., Iqbal, R., Humayun, S. and Chaudhary, S., 2018. Indications and Complications of Obstetric Hysterectomy in a Tertiary Care Hospital of Lahore. *Annals of King Edward Medical University*, 24(S), pp.831-835.
 15. Swathi, E., Sneha, G.S. and Khan, M.I., 2018. ABRUPTIO PLACENTA–CLINICAL PREPAREDNESS TO REDUCE MORBIDITY AND MORTALITY. *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH*, 6(10).