

Maternal and Fetal Outcome among Booked and Unbooked Pregnancies in India

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Abstract

Background: In order for individual health institutions to improve maternal health in India, there is need for research on the local causes of and factors influencing adverse maternal outcomes in booked and unbooked cases. This study would enable care providers and policy makers appreciate the burden of the problem and know where to focus as they distribute resources. *Objectives:* To study and compare socio-demographic profile, maternal risks, factors and fetomaternal outcomes in booked and unbooked cases. *Design:* A hospital based retrospective study. *Setting:* Department of obstetrics and gynaecology, Tertiary care teaching hospital, India. *Methods:* The present study is a prospective study and will be conducted at Department of obstetrics and gynaecology, tertiary care teaching hospital, India. All patients will be subjected to detailed history and systemic examination. Their socio-demographic profile, maternal risks, factors and fetomaternal outcomes in booked and unbooked cases. The data will be analysed and compared. *Conclusion:* If the study demonstrated the positive correlation between lack of proper antenatal care and adverse pregnancy outcome with poorer outcomes in unbooked than booked patients then improving the availability and accessibility of quality antenatal and delivery care services in our environment will

improve pregnancy outcome. This study will be needed in present day situation.

Keywords: Antenatal Care; Booked Cases; Fetal Outcome; Maternal Outcome; Pregnancy.

Introduction

Pregnancy is the time of prime importance in the life of a woman. Consequently, additional consideration are given by the health services of all over the world for antenatal care. The principle point of antenatal care is to achieve a healthy mother and a healthy baby. Maternal complications and adverse perinatal outcome are associated with non-utilization of antenatal care facilities given by the health services. This may be due to non-availability, inaccessibility, or ignorance and poor socio-economic status of the patient [1].

Antenatal care is a health service that has the potential to reduce the further risks which could affect the maternal and fetal outcome. Normal development of the fetus is threatened by myriad of factors, both singly and in combination but completely unexpected complications are infrequent in females who had a thorough evaluation and careful longitudinal observation, in which significant variation are recognized and problems treated during pregnancies and anticipated at delivery. Identification of high risk pregnancy is important not only because, it is the 1st step towards prevention but also because therapeutic intervention can be done, so as to reduce the risk to the fetus and the mother.

Patients do not take antenatal care due to various factors like illiteracy, ignorance

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about health services, unawareness about the antenatal care. Moreover, in our country there is delay at access to health centre, delay in proper referral and these are responsible for the complications and mismanagement of patients during antenatal and postnatal care [2,3].

The main objective of antenatal care consists of care of pregnant women, identification of high risk pregnancies, her safe delivery, care of her new born, post natal follow up and maintenance of lactation. Maternal and perinatal outcomes are dependant on antenatal care and delivery care services provided and it has been observed that the outcomes are always better in booked patients rather than unbooked patients [4,5].

Developing countries like India still have the problem of high maternal and perinatal mortality rates. Maternal death may be due to haemorrhage, convulsions, toxemia of pregnancy or puerperal sepsis. Majority of the women living in the developing countries suffering from complications regarding antenatal care and postnatal care [5,6,7].

Some complications which can be avoided or treated during pregnancy e.g. anaemia, early detection of hypertensive disorders, proper monitoring of fetal growth, localization of the placenta, all these can be achieved if the patient takes proper antenatal care and follows all the scheduled visits. As Antenatal care is largely a part of preventive medicine and has proved to be beneficial for both mother and the baby world over. Antenatal care has multiple benefits, which cumulatively result in significant reduction in the maternal and perinatal morbidity as well as mortality. The results are possible only in women who receive full antenatal care starting from the early days of pregnancy until delivery [8]. Here we intend to study and compare socio-demographic profile, maternal risks, factors and feto-maternal outcomes in booked and unbooked cases

Review of Literature

In a prospective study by Aamir Farzana et al, feto-maternal outcome among booked and unbooked patients in Jinnah Medical College Hospital, Karachi during time period of 1 yr from 1st August 2010 to 31st July 2011 were studied. It was observed that unbooked mothers were younger in age as compared to booked mothers. Besides belonging to the lower educational level, the majority of the unbooked mothers also belong to lower socio-economic class as compared to booked mother. And there was an increased prevalence of anemia, ante partum

hemorrhage, obstructed labour, preclampsia, eclampsia, preterm labour in unbooked mother as compared to booked mothers. Caesarean section rate was also found to be higher in unbooked mothers than the booked mothers. Furthermore, the unbooked mothers had an increased likelihood of having preterm babies in comparison to booked mothers. Perinatal morbidity and mortality were also found to be higher in unbooked mothers as shown by apgar score in 1min and in 5 mins. Moreover, Intra uterine death rate was also higher in unbooked mothers. The study concluded that the pregnancy outcomes in booked patients are far better than unbooked patients [1].

Nargis Danish did a comparative study in Pakistan from 1998 to 1999 in which 322 cases were studied, among these cases 52 were booked and 270 were unbooked. It was observed that majority of those unbooked patients belonged to lower socioeconomic group. The requirement of instrumental delivery was more i.e. 87.5% in unbooked patients as compared to 12.5% in booked patients. Caesarean section was also higher in unbooked patients. About 20% of the unbooked patients with obstructed labour. 19.5% patients had hypertensive disorder. Antepartum haemorrhage was seen in 10.8% of the patient and fetal distress were noted in 23.4% of the patients. Post partum haemorrhage and puerperal pyrexia were more in unbooked patients. Perinatal mortality was high about 19.5% in unbooked patients. So that they concluded that booked patients have better maternal and perinatal outcomes [3].

A comparative study of fetal outcome and maternal outcome of labor in booked versus unbooked antenatal mothers in rural India carried out by M. Vijayashree in Mamata General Hospital, Khammam over a period of 3 years (Jan 2012- December 2014). All the complications of pregnancy were seen more in unbooked group. 67.8% of cases had spontaneous vaginal delivery. It was observed that caesarian sections were more among booked group (31.5%). Still births are more in unbooked (6.1%) than in booked group (0.8%). Two neonatal deaths occurred in unbooked group. Puerperal complications were more in unbooked group. Two maternal deaths were seen during this study, one case of eclampsia and other case was chronic rheumatic heart disease associated with Mitral Stenosis could not be saved in spite of all efforts. Both cases were unbooked. The study concluded that with improvement in antenatal, intranatal, postnatal care maternal and neonatal morbidity and mortality can be reduced especially in unbooked patients [4].

In a study done by Sahadev Sahoo et al, 102 patients were studied, out of these 44 were unbooked and 58 were booked. It was again observed that unbooked

patients belonged to lower socioeconomic status and came from rural and remote areas. Many cases had extremes of ages i.e. there were teenage pregnancies and grand multiparity. Anaemia, pregnancy induced hypertension, post dated pregnancy were more common in unbooked cases. There were two maternal deaths in unbooked cases. Neonatal intensive care admissions were more required among unbooked patients. This study concluded that by proper utilization of health facilities will help in reducing incidence of maternal & perinatal morbidity & mortality [5].

In a study done by Pokharel HP in Nepal, 81% of the unbooked cases had conceived during lactational amenorrhoea. There were 16 maternal deaths among 1056 unbooked cases and no maternal deaths among the booked cases. Maternal intensive care unit admission were more required among unbooked patients. Perinatal mortality was 1/3rd in booked cases as compared to unbooked cases [6].

In a study done by Razia Iftikhar at Karachi which was a retrospective study in which 30 mothers were died, out of those 20(66%) due to sepsis, postpartum haemorrhage was the cause in 5(16.6%) cases, eclampsia was the cause in 2(6.6%) cases. All of these were unbooked cases [7].

Materials and Methods

The present study is a prospective study and will be conducted at Department of obstetrics and gynaecology, tertiary care teaching hospital, India. Patients will be recruited from OPD or indoor wards of department of obstetrics and gynaecology in a period of September 2015 to September 2018. All the patients who had undergone at least three antenatal check-ups during present pregnancy either at our hospital or at other private hospital will be taken as booked cases. And all other cases with no antenatal check-ups will be taken as unbooked cases. All the cases <28 weeks of gestation will not be recruited for this study. After fulfilling these criteria, the patients will be recruited.

All patients will be subjected to detailed history and systemic examination as per proforma attached (Table 1). Before the recruitment, all the patient have to sign the informed consent. The study will be performed in accordance with the ethical guidelines laid by, Helsinki declaration Revised, 2013 and Indian council of medical research, 2006. All selected patients will be asked in detail about their present history, menstrual history, obstetrics history, past history, surgical history, family history, personal

history, dietary history and will be included in the observational study.

Data Analysis

The collected data will be analyzed using statistical package for social science software version 20 (IBM SPSS version 20.0; Armonk, NY: IBM Corp). Continuous and categorical data were presented in

Assessment Proforma

- Name: -
- Age: -
- Sex:
- IPD No.
- Husband's name:-
- Residence:-
- Occupation:-
- Date of examination:-
- Chief Complaints:-
- Menstrual history:-
- Obstetric history:-
- Past history:-
- Personal history:-
- Contraceptive history
- Dietary history:-
- Family history:-

- **General Examination**
 1. Pallor
 2. Icterus
 3. Cyanosis
 4. Clubbing
 5. Lymphadenopathy
 6. Oedema
- Systemic Examination:-
 - Chest:
 - CVS:
 - P/A:

- **Investigations:**
 - ABORh
 - HB
 - BT
 - CT
 - RBS
 - Urine r/m
 - HIV
 - HBsAg
 - VDRL
 - HCV

the form of mean, standard deviation and percentage, while proportions were analyzed using the chi-square test. A p-value ≤ 0.05 will be considered to be statistically significant.

Discussion

Good fetal and maternal outcomes of labor will be recorded from booked and unbooked cases in Indian scenario in this study. Previous retrospective and prospective studies were not elaborated more about booked and unbooked from Indian studies. This study would overcome these limitations. The strengths of this work will be its retrospective design which will enable minimal ethical risks from the women. The main weakness of this study would be of data collected from only one center and it might have been better to have more participating institutions to get a wider picture in the zone and country.

Conclusion

We hope this study would compare the socio-demographic profile, maternal risks, factors and fetal-maternal outcomes in booked and unbooked cases through this hospital based retrospective study.

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Conflict of Interest

None of the authors have competing interest declared.

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