

Study Of Fetomaternal Outcome In Indoor Booked And Emergency Patients

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Abstract: Background: In current maternal mortality situation in India, it is pertinent to determine the relationship between booking status of mother and maternal and fetal outcomes. Material And Methods: In present study 1500 patients were studied from July 2019 to June 2021 in department of Obstetrics and Gynaecology Smt. S.C.L general hospital, Ahmedabad. Amongst these 1000 were booked (≥ 3 antenatal visits) and 500 were emergency (unbooked) cases (<3 antenatal visits). Result: Majority of patients was between 21 to 30 year age group, lower socioeconomic class and from urban area. In booked patients incidence of Antepartum, Intrapartum, Postpartum complications, medical complications, blood transfusion requirement, rate of caesarean section, incidence of Preterm babies, low birth weight babies, NICU admission, perinatal mortality and maternal mortality was less. Conclusion: In booked cases fetomaternal outcome was good. Hence targeted, integrated, patient friendly, affordable, accessible health services need to be delivered in an equitable manner and through routine screening, monitoring and follow up complications, mortality and morbidity can be reduced. [Rathod D Natl J Integr Res Med, 2021; 12(4):14-18]

Key Words: Booked Cases, Emergency Cases, Fetomaternal Outcome

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Introduction: Antenatal care is the greatest “Insurance Policy” a woman can invest during her pregnancy. Pregnancy is not a disease and pregnancy related morbidity and mortality are preventable. In view of current maternal mortality situation in India, it is pertinent to determine the relationship between booking status of mother and fetomaternal outcomes.

Booked patients are those who have ≥ 3 antenatal visits, while emergency (unbooked) patients are those who had <3 antenatal visits¹. Life threatening complications related to pregnancy and childbirth are among the leading causes of morbidity and mortality of women of reproductive age which can occur any time before, during and after delivery which are preventable by good antenatal care, timely identifying high risk factor, prompt referral, hospital delivery and applying DAWN RULE OF 10². It is universal fact that work done under supervision always gives good output.

Material & Methods: This is a prospective, observational study of 1500 admitted patients in the Labour room, OB&GY Department of Smt. S.C.L Municipal general hospital Ahmedabad during period of July 2019 to June

2021. Approvals of Institute Research Council or Ethics Committees (IRB) not obtained. Detailed present and past history was taken regarding medical, surgical and obstetrical information.

General examination was done. Obstetric examination was performed for gestational age, lie, presentation and fetal heart rate and signs of labour. Ultrasonography was done for confirmation of presentation, gestational age, liquor, foetal well being. Routine and specific investigations were carried out. Final diagnosis was made and treated accordingly.

Results: In present study 1500 cases had been studied, out of which 1000(66.67%) were booked and 500(33.37%) were unbooked.

Majority of the patients 970(64.66%) were between 21 to 30 year age. Total no. 267(17.8%) of patients was < 20 year of age.

In booked patients, 50.8% were from lower socioeconomic class while in unbooked 77% were from lower SE class. 76% patients were from urban area while 24% were from rural area. Educated patients were more in booked group (86%) compared to unbooked group.

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Majority of booked patients 87% came directly and in unbooked patients 49% were referred from outside.

In booked patients incidence of anaemia, preeclampsia, eclampsia and antepartum haemorrhage were less (31%)(9%)(1%)(2%) while in unbooked patients incidence were (69%)(22%)(5%)(4.5%) respectively.

In booked patients incidence of medical complications were less (6%) compared to unbooked patients (17.4%). In booked patients incidence of intrapartum complications like obstruction, fetal distress and PROM were (1.5%)(9%)(6%) while in unbooked patients incidence were (10%)(21%)(26%) respectively. In booked patients incidence of postpartum complications like wound sepsis, PPH and DIC were (10%)(5%)(1%) while in unbooked patients incidence were (30%)(15%)(2%) respectively.

In booked patients vaginal delivery rate (61%) was higher than unbooked patients (37%). In unbooked patients cesarean section rate (55%) was higher than booked patients (33.8%). So operative deliveries was more in unbooked patients.

In booked patients 140(14%) required blood transfusion while in unbooked patients 253(50.6%) required it. Thus more BT as well as massive BT (8%) required in unbooked patients. In booked patients incidence of LBW, preterm babies NICU admission and perinatal mortality were less (27%)(22%)(18%)(6%) as compared to unbooked patients (52%)(48%)(38%)(26%) respectively.

Major causes of perinatal deaths were hypertensive disorders, accidental haemorrhages, meconium aspiration, septicemia and pneumonia. Maternal deaths were 6 times higher in unbooked patients 13(2.6%) as compared to 2(0.2%) in booked patients. Major causes of maternal deaths were eclampsia, haemorrhagic shock and renal failure.

Discussion: Maximum no. of cases was seen between 21-30 yrs. As this age group belongs to reproductive age group, patients were aware and mature enough to understand importance of antenatal care. In <20 years age group illiteracy, early marriages, lack of awareness, no family support, unwillingness to attend hospital were

responsible factors in present study. In >31years age group no. of unbooked patients were more compare to other study, because of lower socioeconomic class, lack of money, lack of transport facility, multiparty, social stigma, home delivery by dais are responsible factors for not to seek antenatal care. These results are comparable with Aggrawal study³.

In this study maximum no. of patients were of lower socioeconomic class.

Illiteracy, lack of awareness, lack of money, lack of transport facilities, unwillingness to attend hospital are responsible factors for unbooking status of patients in lower socioeconomic. Our hospital is situated in urban area, so maximum no. of pts was from urban group. In these study illiterate patient were more in unbooked cases and literate patients were booked.

Table 1: Referral/Direct/108

Mode	Present study		Aggrawal study	
	Booked	Unbooked	Booked	Unbooked
Direct	870(87%)	210(42%)	90.6%	65.2%
Referred	40(4%)	245(49%)	2.4%	14.8%
108	90(9%)	45(9%)	7%	20%

In this study direct patients were more in booked while referred were more in unbooked cases. Both studies are comparable with each other except no. of referred patients. Our hospital is referral hospital so no. of referred patients is more in present study than Aggrawal study. Illiteracy, lower socioeconomic class might be responsible factors for not using 108 transport facilities.

Incidence of antepartum complications like anaemia, PIH, preeclampsia, eclampsia, antepartum haemorrhage, abruption, DIC, intrapartum complications like foetal distress, PROM, Malpresentation, prolonged and obstructed labour, vaginal/cervical tear, DIC, caesarean hysterectomy and uterine rupture and postpartum complications like wound gap, postpartum pyrexia, PPH, DIC, postpartum eclampsia are more in unbooked cases than booked cases. . It is due to better antenatal care, timely identifying high risk factors, prompt referral and appropriate management. It is comparable to F aamir⁴ and Aggrawal study, Rachita tukaram study⁵ and Nigerian study conducted by Owolabi AT, et al⁶.

Table 2: Complications (Ante Partum/ Intrapartum / Postpartum)**1) Antepartum Obstetrics Complications**

Complications	Present Study		F aamir Study	
	Booked	Unbooked	Booked	Unbooked
Anaemia(600)	186(31%)	414(69%)	40%	85%
Mild anaemia	132(22%)	186(31%)		
Moderate anaemia	54(9%)	198(33%)		
Severe anaemia	---	30(5%)		
PIH / pre-eclampsia	90(9%)	110(22%)	4.26%	14.5%
Eclampsia	10(1%)	25(5%)		
Antepartum hemorrhage	20(2%)	22(4.5%)	8%	18%
Abruption	15(1.5%)	15(3%)		
Placenta praevia	5(0.5%)	7(1.5%)		
DIC	12(1.2%)	22(4.5%)		

2) Antepartum Medical Complications

Complications	Booked	Unbooked
Thyroid	40(4%)	35(7%)
Diabetes mellitus	16(1.6%)	15(3%)
Jaundice	10(0.1%)	15(3%)
Typhoid	20(0.2%)	10(2%)
Dengue	9(0.09%)	8(1.6%)
Malaria	1(0.01%)	4(0.8%)

3) Intrapartum Complications

Complications	Present Study		F aamir Study	
	Booked	Unbooked	Booked	Unbooked
Foetal distress	90(9%)	105(21%)	----	----
PROM	60(6%)	130(26%)	2.6%	18.5%
Malpresentation	30(3%)	25(5%)	----	----
Prolonged labour	20(2%)	50(10%)	----	----
Obstructed labour	15(1.5%)	50(10%)	7.3%	20%
Vaginal/cervical tear	10(1%)	10(2%)	----	-----
DIC	10(1%)	15(3%)	----	-----
Cesarean hysterectomy	2(0.02%)	6(1.2%)	-----	-----
Uterine rupture	----	3(0.6%)	----	0.5%

4) Postpartum Complications

Complications	Present Study		Aggrawal Study	
	Booked	Unbooked	Booked	Unbooked
Wound gap	100(10%)	150(30%)	0.8%	2.6%
Postpartum pyrexia	70(7%)	110(22%)	----	----
PPH	50(5%)	75(15%)	0.6%	1.6%
DIC	10(1%)	10(2%)	----	----
Postpartum eclampsia	3(0.3%)	5(1%)	0.2%	0.6%

Table 3: Mode Of Delivery

Mode Of Delivery	Present Study		F aamir Study	
	Booked	Unbooked	Booked	Unbooked
Vaginal	610(61%)	185(37%)	72.6%	54%
Caesarean section	338(33.8%)	275(55%)	19.6%	31.5%
Assisted breech delivery	40(4%)	25(5%)	----	----
VBAC	12(1.2%)	13(2.7%)	-----	-----
Laparotomy	-----	2(0.3%)	-----	-----

Thus vaginal delivery was higher in booked patients and caesarean delivery higher in unbooked patients. It is comparable to F aamir study and Egyptian study by Gonia AS, et al⁷.

Table 4: Fetal Outcome

Fetal Weight	Present Study		Aggrawal Study	
	Booked	Unbooked	Booked	Unbooked
< 2.5 kg	270(27%)	260(52%)	16.6%	53.4%
>= 2.5 kg	730(73%)	240(48%)	83.4%	46.6%
Fetal Maturity	Present Study		Aggrawal Study	
Preterm (<37 weeks)	220(22%)	240(48%)	12.4%	40.2%
Term (>37 weeks)	780(78%)	260(52%)	87.6%	59.8%
Perinatal Morbidity	Present Study		Aggrawal Study	
MSL	80(8%)	140(28%)	1.4%	3.8%
Apgar score <7	30(3%)	65(13%)	4.4%	12.4%
Congenital anomaly	10(1%)	25(5%)	0	0.8%
NICU admission	180(18%)	190(38%)	----	----
Perinatal Mortality	Present Study		F aamir Study	
Total mortality	60(6%)	130(26%)	3.3%	16%
IUD	20(2%)	25(5%)	2%	11.5%
Early neonatal death	40(4%)	105(21%)	1.3%	4.5%

In present study foetal outcome was good in terms of fetal weight, fetal maturity, perinatal morbidity and mortality in booked cases then in unbooked cases as compared to Aggrawal study.

Table 5: Maternal Mortality

No. Of Maternal Mortality	Present Study	Aggrawal Study
Booked	2(0.2%)	0.2%
Unbooked	13(2.6%)	1.6%

There were 2(0.2%) deaths in booked patients and while 13 (2.6%) deaths in unbooked patients. It is comparable to aggrawal study and Vijayshree M, et al⁸.

Antenatal care and its importance can be implemented through general and health education, developing infrastructure, transport and communication facilities^{9;10}. Most maternal and perinatal deaths are preventable if complications are diagnosed and managed effectively in time. . The complications, morbidity and mortality in booked patients must be brought down by taking the help of sophisticated steps like monitoring, USG, better vigilant care in labour room¹¹.

Conclusion: Better fetomaternal outcomes in terms of antepartum, intrapartum and postpartum complications, medical complications, maternal and fetal morbidity and mortality can be achieved through proper antenatal care, proper utilization of health care services, regular antenatal care and surveillance, proper transport facilities and mass education

through television and printing media. Hence targeted, patient friendly, affordable and accessible health services need to be delivered in equitable manner to improve the outcome for many antenatal patients.

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