



Original Article

Feto-Maternal Outcomes of Laboring Patients in Booked and Unbooked Patients

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ABSTRACT

The main factor contributing to poor feto-maternal outcomes is lack of antenatal care and awareness among pregnant ladies for need of booking in hospitals for their delivery management. Up to 39% of all obstetric patients in underdeveloped countries are hospitalized due to complications of labor, and same is case with neonates. **Objective:** To determine the association between patient booking status and outcomes because high maternal morbidity and mortality rates are indicative of the poor state of health services. **Methods:** A total of 380 patients, 190 booked patients admitted in emergency and 190 unbooked patients with fetal and maternal problems were included. The demographic data of each patient were recorded to determine the fetomaternal outcomes. **Results:** Different causes of obstructed labour such as CPD (60.62%), malpresentation (17.98%), and malposition (23.34%) were recorded in patients. In booked patients, 9.47, 3.15, and 5.78% of wound infection, anaemia, and ruptured uterus were recorded, respectively, while 11.05, 4.73, and 6.84%, respectively in unbooked patients. Among booked patients, 80.52% had maternal complications while 95.26% of unbooked had complications. Fetomaternal is a disorder that can be avoided and is common in underdeveloped nations. The majority of patients were unscheduled patients who did not obtain adequate antenatal care and as a result, showed up late in advanced labour with obstructional symptoms. CPD was the most typical reason for labour obstruction. **Conclusions:** Puerperal pyrexia was the most frequent maternal consequence, followed by PPH and UTI. Birth asphyxia was the most frequent prenatal consequence, followed by neonatal infection.

INTRODUCTION

Pregnancy is one of the most significant life events for women, their families, and society as a whole, our nation's healthcare system gives pregnant women exceptional care. For the majority of couples, having a child is a joyous experience, but it could also go wrong and pose a serious threat to the mother's life [1-3]. An issue can be avoided with proper prenatal monitoring during the first pregnancy. Poor perinatal outcomes and high maternal morbidity and mortality rates are caused by common complications we see in our unbooked primigravida patients. All of these issues are preventable and can be avoided by having well-

planned and monitored labour and puerperium as well as excellent antenatal monitoring. 52.6% of women in poor nations experience problems during labour and puberty [4, 5]. Antenatal services are particularly important since they not only represent a woman's access to appropriate healthcare but also because prompt specialist consultations can guarantee that any issues that may arise during childbirth are recognized and treated effectively [6-8]. Since antenatal care has been around for 100 years, it has become one of the most important services offered by the healthcare system. Antenatal care is meant to keep

track of and enhance the mother's and foetus' health. Early booking, adequate prenatal care, and skilled labour and delivery can all improve obstetric and perinatal outcomes. Poor prenatal outcomes and maternal problems result from underusing antenatal and delivery care services [9-11]. Pre-eclampsia rates were much higher in unbooked cases (16.6%) compared to booked cases (8.6%), according to a local study. Pregnancy and delivery problems kill more women of reproductive age in developing nations like ours than in industrialized nations, where the death rate is less than 1% [12]. Better resources, services, and equitable allocation could prevent this. Maternal mortality has developed into a public health issue that requires immediate, coordinated, and efficient intervention at all societal levels [13-16]. Poor socioeconomic conditions of the patient and non-use of antenatal and delivery care services are strongly linked to maternal difficulties and poor perinatal outcomes, with unbooked patients having worse outcomes than booked patients. For this purpose, the current research was conducted in the study area.

METHODS

A prospective observational study was done in a private hospital of Dera Ismail Khan, Khyber Pakhtunkhwa (KPK), Pakistan from April 2021 to April 2022. This study included 380 female patients—190 booked patients (patients with more than 28 days of target treatment date) and 190 unbooked patients (patients within 28 days of target treatment date). After obtaining consent, individuals who were admitted to the hospital during the study period and met the stipulated inclusion criteria were evaluated for eligibility. Clinically significant information was recorded regarding the mother's age, any notable maternal disorders, gravida, blood pressure monitoring, haemoglobin estimation, urine protein testing, random or fasting blood sugar estimation in the appropriate patients, the baby's weight and sex, whether the baby was born alive or still, etc. Unbooked prenatal cases with gestational ages less than 28 full weeks were omitted, and women who gave birth in a hospital without any examination or paperwork were included. Using SPSS version 16, data analysis was done after acquiring all the necessary information. p-value under 0.05 were considered significant.

RESULTS

A total of 380 patients were studied in this study and among which, 190 patients were booked and 190 were unbooked. The age of the studied patients either booked or unbooked was in between 20-40 years. There were different causes of obstructed labour such as CPD (60.62%), malpresentation (17.98%), and malposition (23.34%) in patients.

Variables	Booking status				Total	p-value
	Booked (n)	%	Unbooked (n)	%		
Age (years)						
> 20	21	11.05	15	7.89	36	< 0.006
21-25	52	27.36	26	13.68	78	
26-30	31	16.31	62	32.63	93	
31-35	60	31.57	37	19.47	97	
> 40	26	13.68	50	26.31	76	
Total	190	100	190	100	380	
Educational level						
Illiterate	9	4.73	34	17.9	63	< 0.01
Primary	14	7.3	57	30	71	
Middle	28	9.47	60	31.57	88	
Matric	35	18.42	16	8.42	51	
FSC	43	22.63	13	6.84	56	
University	61	32.1	10	5.26	71	
Total	190	100	190	100	380	
Social class						
Upper class	88	46.31	24	12.63	112	< 0.01
Middle class	62	32.63	63	33.15	125	
Lower class	40	21.05	103	54.21	143	
Total	190	100	190	100	380	
Parity						
0	25	13.15	22	11.57	47	< 0.02
1-2	90	47.36	93	48.94	183	
3-4	44	23.15	42	22.1	86	
> 5	31	16.31	33	17.36	64	
Total	190	100%	190	100%	380	

Table 1: Sociodemographic characters of booked and unbooked patients

In booked patients, 9.47, 3.15, and 5.78% of wound infection, anaemia, and ruptured uterus were recorded, respectively, while 11.05, 4.73, and 6.84%, respectively in unbooked patients (Table 2). It was recorded that among booked patients, 80.52% had maternal complications while 95.26% of unbooked had complications.

Maternal complications	Booking status of patients			
	Booked (n)	%	Unbooked (n)	%
PPH	10	5.26	14	7.36
UTI	4	2.10	9	4.73
Maternal mortality	12	6.31	19	10
Puerperal pyrexia	20	10.52	23	12.10
Ruptured uterus	11	5.78	13	6.84
Wound infection	18	9.47	21	11.05
Anaemia	6	3.15	9	4.73
PIH	0	0.00	1	0.52
Total patients	81	80.52%	109	95.26%

Table 2: Maternal complications in booked and unbooked patients
Table 2 shows the maternal complications in booked and unbooked patients. It was noted that unbooked patients had a statistically significant higher incidence of maternal complications than booked patients. The incidence of antepartum haemorrhage (PPH) and UTI in unbooked patients was 7.36 and 4.73%, respectively, while 5.26 and

2.10%, respectively in unbooked patients. 4.73% convulsions were observed in booked patients and 8.42% in unbooked patients while 7.36 and 11.57% neonatal sepsis was recorded in booked and unbooked patients, respectively (Table 3).

Fetal complications	Booking status of patients			
	Booked (n)	%	Unbooked (n)	%
Convulsions	9	4.73	16	8.42
Neonatal jaundice	12	6.31	17	8.94
Birth asphyxia	13	6.84	23	12.1
Perinatal mortality	15	7.89	23	12.10
MAS	11	5.78	14	7.36
Neonatal sepsis	14	7.36	22	11.57
Total patients	75	39.47%	115	60.52%

Table 3: Fetal complications in booked and unbooked patients

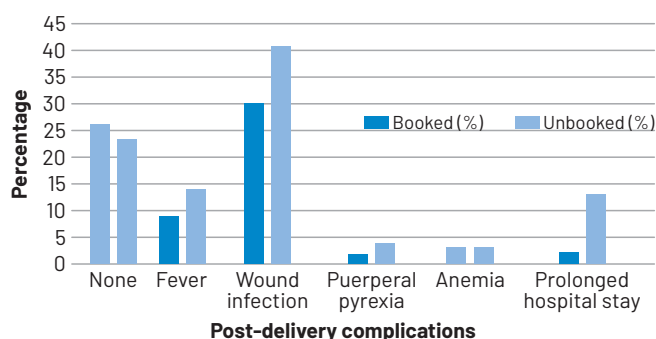


Figure 1: Post-delivery complications in patients

After giving birth to the child, booked and unbooked patients faced various complications. The major complications were fever, wound infection, anaemia, puerperal pyrexia etc. as shown in figure 1. It was recorded that the mode of delivery in the majority of patients was IVD as shown in figure 2.

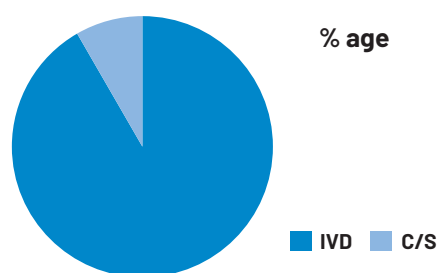


Figure 2: Mode of delivery in patients

DISCUSSION

It is estimated that obstructed labor occurs in 5% of pregnancies and is responsible for 2.8% of maternal deaths worldwide. In the developing world, 99% of these deaths occur. It is estimated that 10.3 to 38.9% of maternal deaths in Africa are caused by obstructed labor. Most of the cases were primiparas. The results of this study were in agreement with those from Hawassa, Pakistan, Bangladesh, and Uganda, where most of the cases were

primiparas. In most cases, mothers with obstructed labor had experienced antepartum hemorrhage, premature rupture of membranes (PROM), and hypertension and twin pregnancy. There have been many studies in west Uganda and Hawassa where about 4.4% and 2.8% of study participants had twins and PROM, respectively [17, 7]. The research was performed by Isalm et al 2012 and Sodje et al 2016, and they resulted in 18 and 82% unbooked and booked, respectively [18,19]. Owolabi et al 2008 had reported 5.96% PPH incidence in unbooked patients which are in line with our study findings [14]. Many other researchers had reported similar results [17, 20]. In the current study, it was seen that unbooked patients face more difficulty or complications before and after delivery. This may be due to a lack of facilities and improper visiting hospitals or clinics than booked patients. Previous many studies had concluded similar results [12, 21-23]. The quality of life is impacted by maternal and foetal morbidity, and the impact is dependent on effective antenatal monitoring. The risk of post-partum haemorrhage and other problems following surgery was considerably higher in the unbooked group. Unbooked cases had higher perinatal mortality. Low birth weight and NICU admission required; increased perinatal morbidity in the unbooked group. NICU transfers affected more infants in the unbooked group than the booked group, and the difference was large (9.8% versus 1.9%). Preterm birth, anaemia, preeclampsia/eclampsia, complicated labour, and puerperal sepsis were less common in the scheduled group, while spontaneous vaginal birth was more common (81.3% vs 59.8%) in booked cases. The current study findings are almost similar to the previous researchers in the globe [24, 25].

CONCLUSIONS

The goal of the current observational study was to evaluate fetomaternal problems. Primigravida substantially outnumbered multigravida among booked patients compared to unbooked patients. The bulk of the patients in our study was unscheduled and came from remote places without access to medical facilities. CPD was the most frequent factor in labor obstruction, followed by malposition and mal-presentation. Puerperal pyrexia was the most frequent maternal complication, followed by wound infection, UTI, and PPH. Birth asphyxia was the most frequent prenatal consequence, followed by newborn sepsis, jaundice, and MAS.

Conflicts of Interest

The authors declare no conflict of interest

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