

Obstetric Haemorrhage: A life threatening condition. Is it preventable?

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ABSTRACT

Obstetric haemorrhage is one of the leading causes of foeto- maternal morbidity & mortality. Among different causes of obstetrical haemorrhage, there are certain associated risk factors. By identifying these factors, preventive measures can be done to have better foeto - maternal outcome. A prospective study was conducted to identify the prevalence and associated risk factors of severe obstetric haemorrhage. It was more common in unbooked patients, age group more than 35 years. High incidence was among the patients delivered by emergency cesarean section .Parity itself was not identified as the risk factor. Uterine atony was commonest cause of the severe obstetric haemorrhage. Results were interpreted leading to conclusion that by identifying the risk factors, more vigilance & care lead to better foeto maternal outcome.

Key words: Obstetric haemorrhage, life threatening condition

INTRODUCTION

World wide severe obstetrics haemorrhage is the main cause of maternal deaths¹. The morbidity associated with severe obstetrics haemorrhage remains a problem²⁻⁴. Obstetric haemorrhage is influenced by the definition, clinical management and characteristic of population. Identification and modification of certain risk factors may include previous post partum haemorrhage, multiple pregnancies, macrosomia, induction of labour, operative vaginal deliveries and cesarean section.⁵⁻⁷The reported prevalence of severe obstetric haemorrhage varies among developed countries from 0.16 per 1000 in Canada to 8.8 per 1000 in Finland^{8,9}. The maternal deaths are rare in developed countries.¹ The morbidity associated with severe haemorrhage is due to the effect of acute hypoperfusion and anemia and also from the intervention necessitated by severe haemorrhage. It is important to document the prevalence, risk factors and consequences of severe obstetric haemorrhage. Such information would help to improve both preventive and curative health care services.

A prospective study was conducted at Gynae unit 1 Lahore General Hospital & services hospital Lahore for twelve months as mentioned below. The aim of this study was to determine the prevalence, causes and risk factors for severe obstetrical haemorrhage among pregnant women attending the mentioned study place.

Study Population: The prospective study was conducted at Lahore General Hospital Lahore Gynae unit 1 and Services Hospital Lahore Gynae Unit 1 for one year from May 2008 to April 2009 .Both hospitals are tertiary hospitals having a high number of referral

cases from the city as well as from the periphery. In both hospitals about 90 % of the obstetrical work is done in emergency. During the mentioned period total 13,800 patients were admitted in labour room and 12,356 patients delivered. All the patients admitted in labour room delivered vaginally or had instrumental delivery or cesarean section were included in the study. The data was collected on a designed performa. It included detailed history including demographic information, information regarding maternal health before and during pregnancy, detailed information about labour, delivery and complications occurring intrapartum or postpartum and special concern was focused on predisposing factors to severe obstetrical haemorrhage. Foeto maternal outcome in relation to morbidity , mortality, the number of blood transfusions, associated complications as renal complications & DIC and average stay in the hospital was noted.

Variables: The main outcome measure was severe obstetric hemorrhage. It was defined as a visually estimated blood loss of more than 1500 ml intrapartum or within 24 hours postpartum. The other explanatory variables included demographic, obstetric and medical factors. Age at the time of delivery was categorized in six groups as shown in table1. Parity was grouped as primigravida, multigravida and grand multigravida (table1). Booking status was mentioned as patients who had 3 antenatal visits as booked patients and patients with less than 3 antenatal visits as unbooked patients able 2. In medical evaluation, medical disorders (cardiac disease, chronic hypertension, diabetes mellitus and epilepsy) during pregnancy or before pregnancy was documented. Pregnancy related variables included

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multiple pregnancy, previous cesarean section, HELLP syndrome, gestational diabetes, pre eclampsia and anemia. Labour related variables included induction of labour, prolonged labour and mode of delivery (SVD, SVD with episiotomy, instrumental delivery, emergency/elective cesarean section or assisted breech delivery).

RESULTS

The cross tabulations were used to study the demographic, obstetrical and medical factors in women with severe obstetrical haemorrhage. Total number of patients admitted in labour room was 13,800 and 12,356 patients delivered during this period. Results showed that severe obstetrical haemorrhage (more than 1500 ml) was in 198 patients (i.e. 1.6%). Regarding the age of the patients, maternal age more than 30 years was identified as the risk factor for the haemorrhage.

Table: 1 Demographic risk factors associated with severe obstetrical haemorrhage

Age (Years)	=n	%age
15-20	14	7
21-25	26	13
26-30	40	20
30-35	56	28
36-40	42	21
Above 40	22	11
Parity	Number	Percentage
Primigravida	62	31
Multigravida	58	29
Grand multigravida	78	40

Table 2 Booking status of patients with obstetrical haemorrhage

Status	=n	%age
Booked	22	11
Unbooked	178	89

Table :3 causes of obstetrical haemorrhage

Causes	=n	%age
Retained placenta/ retained products of conception	28	14
Genital tract trauma	30	15
Uterine atony	63	34
Placental abruption	18	09
Placenta previa	10	05
Unidentified	47	24
Coagulopathy	02	01

In study 130 patients (60%) were above 30 years. There was not very significant difference in relation to parity. The major cause of haemorrhage was uterine atony in 63 patients (34 %). The other causes were genital tract trauma in 30 patients (15%) and retained

products of conception in 28 patients (14%). Mode of delivery was the associated risk factor for the post partum haemorrhage (Table 4). Emergency cesarean section was the most significant risk factor for the haemorrhage. There was not significant difference in postpartum haemorrhage in patients with spontaneous onset of labor or induction of labour.

Maternal morbidity was significantly higher in patients with severe haemorrhage. It included need for blood transfusions, ICU admission, post partum sepsis, stitching of tear under general anesthesia, hysterectomy, renal failure and three maternal death.

Table .4 Predisposing factors of severe obstetrical haemorrhage

Factors	=n	%age
Anemia (hemoglobin less than 9 gm/dl)	138	70
Multiple pregnancy		
Previous cesarean delivery	06	03
Labor related factors	28	14
Induction of labor		
Prolonged labor	32	16
	98	50
Mode of delivery		
SVD	32	16
SVD with episiotomy	50	25
Forceps	14	07
Vacuum	20	10
Elective cesarean section	18	09
Emergency cesarean section	60	30
Assisted breech delivery	04	02
Birth weight more than 4.5 kg	13	07

DISCUSSION

The prevalence of severe obstetric haemorrhage was 1.6 %. As in study measurement was based on visual estimation of blood loss, the prevalence rate reported might have been underestimated as already mentioned in other study.¹⁰ The prevalence is comparatively higher in developing countries as compared to developed countries.¹¹⁻¹³ In our study higher prevalence may be due to the study place that is tertiary hospitals getting heavy referral emergencies. The booking status was important important contributing factor for haemorrhage. As 89% Of the patients in study were unbooked, it contributed the high prevalence rate. The significant increase in haemorrhage in with age above 30 years emphasizes the importance of not deferring pregnancy to older age⁵ This high incidence attributed to age may be due to increased parity, placenta previa, abruption placenta, uterine atony and increased incidence of cesarean section. There was a marked difference in patient who had spontaneous vaginal delivery 32 patients (16%) and 78 patients (39%) delivered by cesarean section , especially high figure in emergency cesarean section.

This correlated with already published study.¹⁴ Suboptimal management of third stage of labour might have also contributed the high prevalence found in the study. Manual removal of placenta if performed one hour after it is retained, leads to longer third stage of labour and increased risk of postpartum haemorrhage. Induced labour, prolonged labour, multiple pregnancy, anemia, previous cesarean section & emergency cesarean sections and macrosomia are known to be associated with severe haemorrhage^{5, 6}.

CONCLUSION

The result of the study indicate that severe obstetric haemorrhage can be used as an indicator to the assess the level of obstetric care. By identifying the risk factors of severe obstetrical haemorrhage, preventive measures can be taken to avoid foeto maternal morbidity & mortality.

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