

Scenario of obstetrical emergencies at a tertiary care hospital

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Abstract

Objective: To study relative preponderance of critical obstetrical emergencies with various maternal factor like quality of antenatal care during pregnancy, regular antenatal checkup during pregnancy, socioeconomic status, education and area wise distribution and to study the contribution of each emergency to maternal mortality and morbidity and fetal outcome.

Methods: The present study was conducted on a prospective basis for one year, from 1st Feb 2011 to 31st Jan 2012 in the department of Obstetrics and Gynecology Govt. Medical College and Rajindra Hospital, Patiala.

All the cases referred as critical emergency from nearby areas during their antenatal period or within 42 days of delivery were included in the study. A detailed history including age, parity, gestational age, antenatal care during pregnancy, socioeconomic status, obstetrical history, medical or surgical disorders was taken into account.

Attention was paid on the management received by each case including blood transfusion, surgical interventions, ICU admission etc.

Results: Total deliveries during this period were 2223. Total obstetric emergencies came out to be 252. Thus the incidence of obstetric emergencies came out to be 11.3%. Various obstetric emergencies that were encountered – Hemorrhage (47.97%), Hypertensive disorders of pregnancy (35.32%), obstructed labor (12.3%), P. sepsis (3.18%), Rupture uterus (2.78%). Maternal mortality came out to be 8.8% Hemorrhage was leading cause of death in 36.36% cases followed by P. sepsis (13.64%), Hypertensive disorders of pregnancy (13.64%), Rupture uterus (9.09%). There were 70.2% Live births and 29.8% still births.

Conclusions: It was concluded that obstetric emergencies are more common in unbooked cases and women with low socioeconomic status with poor access to antenatal care.

Introduction

An emergency by definition is “an unforeseen combination of circumstances or the resulting state that calls for immediate action.” Despite improvements in prenatal care and advancements in medical technology, the practice of obstetrics will always provide the clinician with “life-or-death” situations that call for immediate response.⁽¹⁾

During the last decade, it has become apparent that a large portion of the young women and children at greatest risk of obstetric and gynecological emergencies increasingly fall out of the health care system. In several areas of the country up to 25% of women receive no prenatal care. In other areas, close to 50% of young women have no primary care providers to handle emergencies.⁽²⁾

The maternal mortality ratio (MMR), expressed as maternal deaths per 100,000 live births over a given period, is a major measure of quality of obstetric care.^(3,4) WHO analysis of cause of maternal death reveals the following causes of Maternal Deaths – Hemorrhage (30.8%), Hypertensive disorders (9.1%), Sepsis/ Infections (11.6%), Obstructed labor (9.4%), Abortion (5.7%), Anemia (12.8%), Other Indirect causes of death (12.5%), Other direct causes of death (1.6%), Embolism (0.4%) Ectopic pregnancy (0.1%), Unclassified (6.1%).⁽⁵⁾

Cases presenting with all these morbid conditions are included in the present study.

Material and Methods

The present study was conducted on a prospective basis for one year, from 1st Feb, 2011 to 31st Jan, 2012 in the department of Obstetrics and Gynecology, Govt. Medical College and Rajindra Hospital, Patiala.

All the cases referred as critical emergency from nearby areas during their antenatal period or within 42 days of delivery were included in the study.

A detailed history including age, parity, gestational age, antenatal care during pregnancy, socioeconomic status, obstetrical history, medical or surgical disorders were taken into account.

A thorough general physical examination, local examination including per abdomen and per vaginam examination was done in every case.

All the relevant investigations were done in each and every case.

Attention was paid to the management received by each case including blood transfusion, surgical interventions, ICU admission etc.

Biochemical evaluation was done by performing routine investigations and Special Investigations e.g. USG, ECG, CT Scan, 24 Hour urinary protein, Pus for C/S, Color Doppler study and Blood Culture whenever required.

Results

Table 1: Demographic profile of cases

	Age (yrs)	No	% age
1	18-23	98	38.39%
	24-29	125	49.60%
	30-35	27	10.71%
	>35	2	0.79%
	Mean age	25.04 years	
2	Parity		
	0	104	41.27%
	1	70	27.78%
	2	42	16.67%
	>2	36	14.29%
	Mean parity	1.04	
3	Residence		
	Rural	165	65.48%
	Urban	87	34.52%
4	Literacy		
	Educated	74	29.37%
	Uneducated	178	70.63%
5	Booking status		
	Booked	58	23.02%
	Unbooked	194	76.98%
6	Socioeconomic status		
	Lower	100	39.68%
	Upper lower	80	31.74%
	Lower middle	53	21%
	Upper middle	15	5.98%
	Upper	4	1.59%

Table 2: Distribution of subjects according to Diagnosis

Diagnosis		No	% age
Hypertensive disorders of pregnancy		89	35.32%
Antepartum hemorrhage	Placenta previa	24	48
	Abruption placenta	24	
Postpartum hemorrhage		37	14.68%
Ectopic pregnancy		36	14.29%
Obstructed labor		31	12.3%
Rupture uterus		7	2.78%
Puerperal sepsis		8	3.18%
Inversion uterus		3	1.19%
Septic abortion		5	1.98%
Medical disorders		10	3.95%
A.	Cardiac failure	5	1.98%
B.	Viral hepatitis	3	1.19%
C.	Pneumonitis	2	0.78%

Note – Out of 24 cases of Abruptio placenta 22 cases had severe PIH as the underlying etiology and the other 2 has undetermined etiology. Hence 22 cases are

taken as combined emergency, as they presented with both APH and PIH.

Table 2 shows the distribution of emergency conditions. Out of 252 emergencies the majority were due to Hemorrhage i.e. 121 cases. They were distributed into three categories- APH 48 cases, PPH 37 cases, Ectopic pregnancy 36 cases respectively. Next common presentation was HDP 89 cases followed by Obstructed labor 31 cases, Rupture uterus 7 cases, P. sepsis 8 cases, Septic abortion 5 cases & Inversion uterus 3 cases. 10 cases presented with complications due to associated medical disorders.

Table 3: Obstetric Management of the cases

Management	No	% age
Conservative	27	10.71%
Vaginal deliveries	48	19.05%
Emergency LSCS	90	35.71%
Laparotomy with salpingectomy and/or oophorectomy	36	14.28%
Laparotomy with subtotal hysterectomy	8	3.17%
Laparotomy with peritoneal lavage	3	1.19%
Laparotomy with uterine repair	5	1.98%
Cesarean hysterectomy	3	1.19%
Exploration under anaesthesia	22	8.73%
MROP	7	2.78%
Hydrostatic reduction	3	1.19%
Total	252	100%

Table 3 shows that obstetric management of patients. Only 27 (10.71%) cases were treated conservatively comprising of Postpartum eclampsia 11 cases, PPH 5 cases, P. sepsis 6 cases, Septic abortion 1 case, Antepartum eclampsia 2 cases and pneumonitis 2 cases. 48 cases had vaginal delivery. 90 cases underwent emergency LSCS. 36 cases underwent laparotomy with salpingectomy and oophorectomy. 8 cases were taken up for subtotal hysterectomy. Uterine repair was done in 5 cases. Laparotomy with peritoneal lavage was done in 3 cases. MROP was done in 7 cases. Cesarean hysterectomy was done in 3 patients. Hydrostatic reduction was done in 3 cases.

Maternal mortality (n=250)

Out of the total 250 cases, 22 cases could not be saved giving a maternal mortality of 8.8%. 2 cases got referred to higher institute.

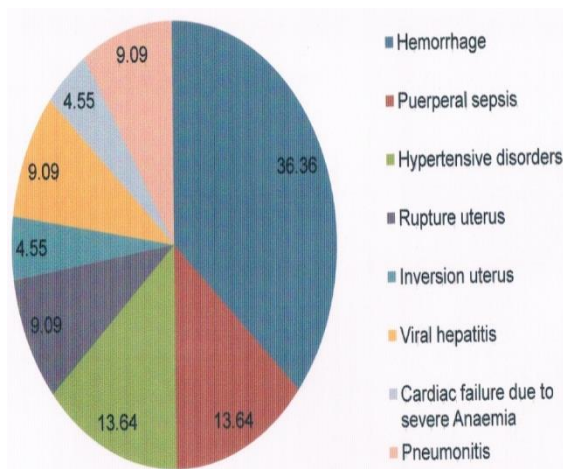


Fig. 1: Causes of Death %

Table 4: Fetal Outcome (N-208)

Outcome	No	%age
Live births	146	70.2%
Stillbirths	62	29.8%
Total	208	100%

Note-Excluding the first trimester complications and postpartum cases, a total of 208 fetuses were delivered including a twin gestation.

Out of a total of 208 fetuses, there were 146 (70.2%) live births, and 62 (29.8%) stillbirths.

Discussion

There were 252 cases of obstetric emergency during the period. Thus incidence came out to be 11.37%. Present study has 76.98% of patients as unbooked which is almost similar to the study done by Oladapo et al⁽⁶⁾ (2005) and Siddique et al⁽⁷⁾ (2012) Present study has 19% incidence of APH which is comparable at Prual et al⁽⁸⁾ (2000).

Present study has 14.68% cases of PPH which is comparable to Oladapo et al⁽⁶⁾ (2005) and Siddique et al⁽⁷⁾ (2012). HDP constituted 35.32% cases of obstetrical emergencies which is similar to the study done by Oladapo et al⁽⁶⁾ (2005).

Obstructed labor constituted 12.3% cases which is comparable to Oladapo et al⁽⁶⁾ (2000). Most common cause of maternal mortality in present study was haemorrhage which is comparable to Prual et al⁽⁸⁾ (2000).

Present study show HDP contribution to maternal mortality 13.64% which is almost similar to Siddique et al⁽⁷⁾ (2012), Prual et al⁽⁸⁾ (2000).

Conclusions

From the present study it is concluded that Obstetric emergencies are more common in subjects who are unbooked, belong to low socioeconomic status and have poor access to antenatal care. Distance of referral institute from hospital is directly proportional to

the propensity of obstetric complications. Most of the maternal complications occur in the third trimester of pregnancy. Anemia has a major bearing on maternal morbidity and mortality. Hemorrhage, Hypertensive disorders of pregnancy, Puerperal sepsis, Rupture uterus, Inversion uterus, Cardiac failure due to severe Anaemia and Viral hepatitis are the major causes of maternal mortality. Most of the mortality occur in those cases who are unbooked and are referred from greater distance. Fetal morbidity and mortality is also high in cases who are unbooked and have no antenatal care.

Thus there is a dire need of proper antenatal care including treatment of anemia, timely referral from periphery of high risk cases to prevent maternal and fetal morbidity and mortality.

Synopsis

Obstetric emergencies are more common in subjects who are unbooked, belong to low socio-economic status and have poor access to antenatal care.

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