Section: OBG

Original Research Article

EPIDEMIOLOGY OF OBSTETRIC EMERGENCIES PRESENTING TO A TERTIARY CARE CENTRE IN ANDHRA PRADESH – A RETROSPECTIVE STUDY

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Received : 02/08/2023
Received in revised form : 12/09/2023
Accepted : 25/09/2023

Keywords:
Obstetric emergencies, maternal mortality, maternal morbidity , perinatal mortality.

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DOI: 10.47009/jamp.2023.5.5.227

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm
2023; 5 (5); 1156-1159

Abstract

Background: Obstetric emergencies have a profound effect on maternal and fetal outcome and to a large extent, these are preventable. The purpose of this study is to determine epidemiology of obstetric emergencies and their clinical presentation. **Materials and Methods:** This was a retrospective study in which first 200 antenatal women who were admitted and treated in our tertiary care referral government hospital for an obstetric emergency from march 2019 to February 2021 were recruited. **Result:** Of the 200 obstetric emergencies that were studied, majority i.e,150 (75%) belonged to the age group of 21-30 years, 100(50%) were multigravidae, 127 (63.5%) were unbooked. Majority were educated only upto primary school level. Major portion 179(89.5%) were referred from rural areas. Commonest obstetric emergencies encountered were obstetric hemorrhage – APH in 50 (25%) patients, PPH in 36 patients(18%) followed by eclampsia in 45 patients(22.5%).Maternal mortality occurred in 21 patients (10.5%).Live birth rate noted was 81.38%. **Conclusion:** In our study, more than half were unbooked and referred from rural areas. Early registration of pregnancies, regular antenatal checkups, identification of high risk cases, immediate intervention to prevent complications and prompt referral of high risk cases to tertiary care centre goes a long way in reducing maternal and perinatal mortality and morbidity. Improving the education of women, early antenatal booking and training health care workers at all levels of health care access points adds impetus to achieve the same.

INTRODUCTION

Obstetric emergencies are life threatening medical conditions that occur in pregnancy or during or after labour. These occur suddenly and require immediate attention to save life.[1]

Obstetric emergencies are leading causes of maternal mortality worldwide especially in developing countries like India where multiple factors play a role in patients access to healthcare services.[2]

Aims and objectives:

Our study aimed to determine epidemiology and clinical presentations of obstetric emergencies so that appropriate measures can be taken to decrease their occurrence.

MATERIALS AND METHODS

Study Design: Retrospective study

Study Period: 2 years i.e, from March 2019 to February 2021

Methods: Data of first 200 cases of obstetric emergencies who reported to our emergency department during study period collected.

Inclusion Criteria

1. Pregnant women irrespective of gestational period with singleton or multiple pregnancies who came to our emergency department directly or referred from other centres with documented need for intensive care monitoring and intervention.
2. Cases with obstetric emergencies like antepartum hemorrhage, eclampsia, rupture uterus referred or occurred at our institute.
3. Sudden postpartum collapse.
4. Patients with third stage complications like retained placenta, postpartum hemorrhage.
5. Patients with medical disorders like severe anemia or heart disease.

Exclusion Criteria

Pregnancies with surgical complications like appendicitis, hernia, cholecystitis.

Data regarding name, age, place of residency, distance to reach referral hospital, reason for referral, parity, level of antenatal care received in present

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pregnancy, gestational age of present obstetric complication, previous obstetric history were recorded.

Statistical Analysis: Data was entered in MS Excel spread sheet and analysis was done using SPSS Version 21.0

Categorical variables were presented in number and percentage.

RESULTS

There were 19,994 deliveries during our study period, of which 200 obstetric emergencies were analyzed. The demographic and obstetric characteristics collected are listed below.

Table 1: Demographic and Obstetric Characteristics

Sl. No.	Variable		No. of cases	Percentage
1	Age	<20 yrs	30	15
		21-30 yrs	150	75
		>30 yrs	20	10
		Total	200	100
2	Parity	Primi	75	37.5
		Multi	100	50
		Grandmulti	25	12.5
		Total	200	100
3	Gestational age	Before period of viability	12	6
		Preterm	50	25
		Term	138	69
		Total	200	100
4	Booking status	Unbooked	127	63.5
		Booked	73	36.5
		Total	200	100
5	Educational status	Illiterate	59	29.5
		Primary school	92	46
		High school	49	24.5
		Total	200	100
6	Area	Rural	179	89.5
		Urban	21	10.5
		Total	200	100
7	Distance from hospital	<25km	42	21
		25-60 km	127	63.5
		>60km	31	15.5
		Total	200	100

Majority of obstetric emergencies 150 (75%) occurred in age group of 21-30 years and in multigravida i.e,100 (50%). Among 200 cases analyzed, 138 (69%) were term, 50 (25%) were preterm and 12 (6%) were below period of viability. Majority i.e., 127(63.5%) were unbooked. 92(46%) had education only up to primary school level. The majority i.e., 127(63.5%) were from 25-60 km of distance from hospital.

Table 2: Referral status

Status	No. of cases	Percentage
Referred	125	62.5
Direct admission	75	37.5
Total	200	100

Among 200 patients, 125 (62.5%) were referred from other centers, 75(37.5%) were direct admissions.

Table 3: Clinical types of obstetric emergencies

Sl. No.	Type of emergency	No. of cases
1	Ectopic Pregnancy	11
	Septic Abortion	1
2	Antepartum	
	a) Placenta previa	23
	b)Abruption placenta	27
	c)Mal presentations	14
	d)Severe preeclampsia	17
	e)Eclampsia	32
	f)Severe anemia	7
3	Intrapartum	
	a)Eclampsia	1
	b)Rupture uterus	9
4	Post partum	
	a)Atonic PPH	29
	b)Traumatic PPH	7
	c)Retained placenta	4

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	d)Postpartum eclampsia	12
	e)Pulmonary edema	9
	f)Acute renal failure	2
	g)Uterine inversion	1
	h)DIC	4
	i)Adherent placenta	2
	j)Cardiac disease	4

Most common obstetric emergency was obstetric hemorrhage, antepartum hemorrhage in 50(25%), postpartum hemorrhage in 36 (18%), followed by eclampsia in 45(22.5%)

Table 4: Causes of maternal deaths

Sl. No.	Causes of maternal death	No of cases	Percentage (%)
1	Preeclampsia with eclampsia	12	57.14
2	PPH	4	19.04
3	APH	2	9.5
4	Heart disease	1	4.76
5	Septic abortion	1	4.76
6	Uterine inversion	1	4.76
Total		21	100

In our study, out of 200 patients maternal mortality was noted in 21 (10.5%). Major cause for maternal mortality was preecalmapsia and eclampsia noted in 12 (57.14%) followed by obstetric hemorrhage – PPH in 4 (19.04%), APH in 2 (9.5%).

Table 5: Fetal outcome

Sl. No.	Fetal outcome	No of cases	Percentage (%)
1	Live births	153	81.38
	Intrauterine deaths	22	11.7
	Still births	13	6.9
	Total	188	100
2	Causes for perinatal mortality	No of cases	Percentage (%)
	Birth asphyxia	20	31.25
	Prematurity	30	46.8
	Fetal growth restriction	10	15.6
	Septicemia	4	6.25
	Total	64	100

Out of 200 patients, 188 were beyond period of viability, of them, live births were noted in 153 (81.38%), intrauterine deaths in 22 (11.7%), still births in 13 (6.9%). Prematurity constituted major cause for perinatal mortality.

DISCUSSION

Two hundred obstetric emergencies satisfying inclusion criteria were assessed. Majority of obstetric emergencies (75%) occurred in the age group of 21-30 years. Study by Shanaz Teng et al., showed similar findings. In our study 50% of obstetric emergencies occurred in multigravidae similar to study by Dipali Prasad et al., which showed 55.35% of obstetric emergencies in multigravidae.[4-7]

In our study, obstetric emergencies occurred more commonly in term pregnancies (69%). Majority were unbooked (63.5%). But in study by Anju arpana et al., only 41% were unbooked.[5] Lack of awareness of importance of antenatal checkups in women of our catchment area may be the reason for high incidence of unbooked patients in our study.

Majority of women were from rural areas (89.5%) in our study. Anju arpana eta al, showed that 58% were from rural areas in their studies.[5] Lack of adequate medical facilities and improper utilization of health services may be the reason for higher incidence of obstetric emergencies in women from rural areas.

In our study, 62.5% were referred and 37.5 % were direct admissions. Appropriate and timely referral of obstetric emergencies aids in reduction in maternal mortality.[6] WHO estimated that atleast 88 to 98% of maternal deaths can be prevented with timely referral using efficient referral system.+[7]

In our study, majority i.e., 46% were educated only upto primary school level.29.5% were illiterates. Poor educational status leads to ignorance in utilization of medical services.

In our study, 63.5% travelled a distance of 25-60 km ,21% travelled less than 25 km ,15.5% travelled more than 60km to reach our hospital stressing the importance of place of residence for major utilization of maternal health care services. Avoidance of delay in reaching hospital reduces maternal mortality.[8]

Most common clinical presentation of obstetric emergency was obstetric haemorrhage in our study. Abhasingh et al., conducted a study which showed slightly different results, eclampsia (34.58%) being most common presentation followed by antepartum haemorrhage (27%).[9]

Out of 200 patients, maternal mortality was noted in 21 (10.5%) in our study which is higher than noted in other studies. In a study conducted by Poornima et al,

ISSN (O): 2687-5365; ISSN (P): 2753-6556

maternal mortality was seen in 7%.[10] In our study, the commonest cause of maternal mortality was preeclampsia and eclampsia (57.4%) followed by obstetric hemorrhage (28.54%).In study by Sangeeta et al., hypertensive disorder (37.5%) was the commonest underlying cause for maternal mortality.[11]

In our study, out of 200,[12] were abortions and 188 were beyond period of viability. Live births were 153 (81.38%). Perinatal deaths were noted in 64, major causes being prematurity and fetal growth restriction.

CONCLUSION

Obstetric emergencies like obstetric hemorrhage, hypertensive emergencies, puerperal sepsis are leading causes of maternal mortality especially in low resource countries and most of these could be prevented.[12]

Management of obstetric emergencies following standardized hospital guidelines, reinforcement of referral systems, upgrading obstetric services with ICU will result in decrease in maternal mortality.[13]

Health education to pregnant women regarding regular visits, nutrition, and medication during pregnancy, recognition of danger signs and prompt reporting to health facility plays a vital role in improving maternal and fetal outcome.

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ISSN (O): 2687-5365; ISSN (P): 2753-6556