

Original Research Article

Review of obstetrical emergencies and fetal outcome in a tertiary care centre

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ABSTRACT

Background: Obstetric emergencies can occur suddenly and unexpectedly. Obstetrics is unique in that there are two patients to consider and care for, a mother and a baby or fetus. Identification and referral of high risk pregnancies are an integral part of maternal and child health services. Timeliness and appropriateness can reduce the incidence of obstetric emergencies. Present study was carried out to know the incidence, nature and outcome of obstetric emergencies.

Methods: Retrospective study of obstetric emergencies admitted to Obstetrics and Gynaecology department of Indira Gandhi Institute of Medical science, Patna from March 2015 to September 2017.

Results: The common clinical presentation was Ectopic Pregnancy (19.64%), Heart Disease (16.64%), Abortion (13.69%), Severe Anaemia (16.66%), Purporeal Sepsis (9.52%), Severe pregnancy induced hypertension (3.57%), Eclampsia/ HELLP Syndrome (2.38%), Multiple Pregnancy (1.19%) Malignancy Disorder with Pregnancy (2.97%) and HIV in pregnancy (0.59%). Intervention done include Dilation and evacuation (13.69%), Caesarean section (28.57%), Vaginal delivery (22.62%), Caesarean Hysterectomy (2.38%), Exploratory Laparotomy (20.83%) and conservative management in (11.90%) of patients. Maternal outcome include shock due to rupture ectopic and postpartum (16.68%), Blood Transfusion done in (27.99%), Septicaemia (15.48%), ICU admission (8.92%), HDU (12.5%), Pulmonary oedema (6.54%), DIC (4.16%), CCF (3.57%), Ventilatory Support (1.78%) and Maternal Mortality (2.38%). Fatal outcome includes live birth (58.8%), NICU Admission (27.45%), Ventilatory Support (7.84%) and Neonatal mortality (5.88%).

Conclusions: High risk pregnancy identification and proper antenatal, intranatal and postnatal care will reduce the incidence of obstetrical emergencies. Peripheral health care system need to be strengthen and early referral need to be implemented for better maternal and fetal outcome.

Keywords: Fetal outcome, Maternal outcome, Obstetrical emergency

INTRODUCTION

An emergency can be defined as a situation of serious and often dangerous nature, developing suddenly and unexpectedly and demanding immediate attention in order to save life.¹ Obstetrics is unique in that there are two patients to consider and care for, a mother and a baby or fetus. 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 case. Obstetric emergencies are the leading cause of maternal mortality worldwide and particularly in developing countries where literacy, poverty, lack of antenatal care, poor transport facilities and inadequate equipment/staffing combine to magnify the problem.^{2,3} Globally 61% of births are assisted by skilled birth attendants, while in some low-income countries, the average is as low as 34%.⁴ The current level of home deliveries in

India is 59%. All the Obstetrical patients presenting to the obstetric emergency ward in the reproductive age will be analysed regarding, age, parity, period of gestation, puerperal complication or post abortion sepsis, antenatal care received at the periphery, reason for referral and presentation. Patients were further evaluated for obstetrical and medical complication, mode of delivery where normal, caesarean section, instrumental, maternal outcome in terms of complications, ICU admission, blood transfusion, maternal mortality and fetal outcome in terms of mortality, NICU admission and ventilatory care.

A Retrospective study was carried out to know the incidence and nature of Obstetrical emergencies and their maternal and perinatal outcome at tertiary care teaching hospital.

METHODS

It was retrospective study.

Study period was from March 2015 to Sept 2017.

Study population

The case records of the emergencies admitted in OBG dept. at IGIMS, was evaluated in detail for diagnosis, management given/outcome, mode of delivery, fetal outcome and Mortality. It includes Sever Anaemia, Puerperal sepsis, Abortion, Ectopic pregnancy, Heart disease, Eclampsia/HELLP Syndrome, Antepartum haemorrhage, Postpartum haemorrhage and Malignant disorder with pregnancy.

Inclusion criteria

The Pregnant Patient who required ICU care or the patient considered as high risk and aggressive management was done depending on the clinical condition of the patient that include pulse >100/mints, B. P<100/60 or >than 160/110, blood lose >1.5 litres and blood transfusion more than 2 units etc.

Exclusion criteria

Pregnant patient without any obstetrical emergency.

RESULTS

Total number of obstetric admission during the study period was 770. The proportion of obstetric emergencies cases of the total obstetric admission in this study was (28.82%). Out of total obstetric emergencies cases (36.90%) were booked and (63.10%) were referred patient. The maternal age ranged from 20 to 40 years, maximum was between 21 to 30 years of age.

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Figure 1 shows the maternal age ranged from 20 to 40 years, maximum was between 21 to 30 years of age.

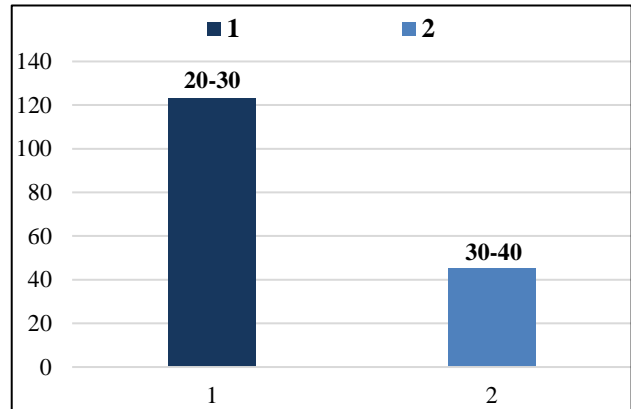


Figure 1: Distribution of cases according to age.

In Figure 2, there were primipara (37.5%), multipara (55.35%) and (7.14%) were grand multipara.

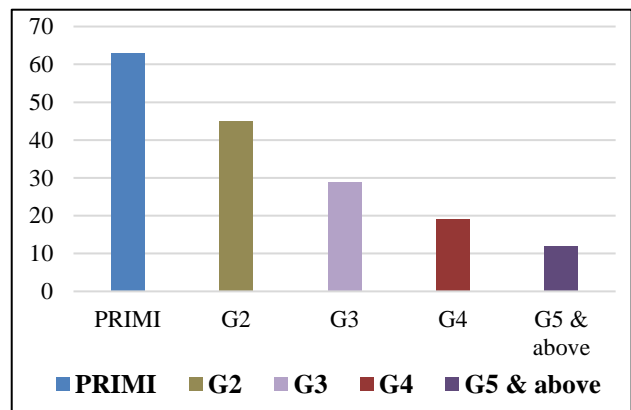


Figure 2: Distribution of cases according to parity.

Figure 3, details about the clinical presentation of the patients and the common causes came out were Ectopic pregnancy (19.64%), Heart disease with pregnancy (16.66%), Severe Anaemia (16.66%), Abortion (13.69%), Haemorrhagic Causes (11.90%), Puerperal sepsis (9.52%), Severe Pregnancy induced hypertension (3.57%), Eclampsia/HELLP Syndrome (2.38%), Malignant disorder with Pregnancy (2.97%), Acute Fulminant Hepatitis with pregnancy (1.19%), Multiple pregnancy (1.19%) and HIV in pregnancy (0.59%).

Figure 4 summarizes the mode of Intervention. Out of 770 admissions, (28.57%) were delivered by caesarean section and (22.62%) were delivered vaginally. Exploratory laparotomy was done in (20.83%) of cases for rupture ectopic. Dilatation and evacuation was done in (13.69%) for septic abortion and incomplete Abortion.

Conservative treatment was given in (11.90%) patients either for postpartum haemorrhage, Post LSCS septicaemia. Caesarean hysterectomy was done in (2.38%) of patient for atonic uterus, rupture uterus and broad ligament hematoma.

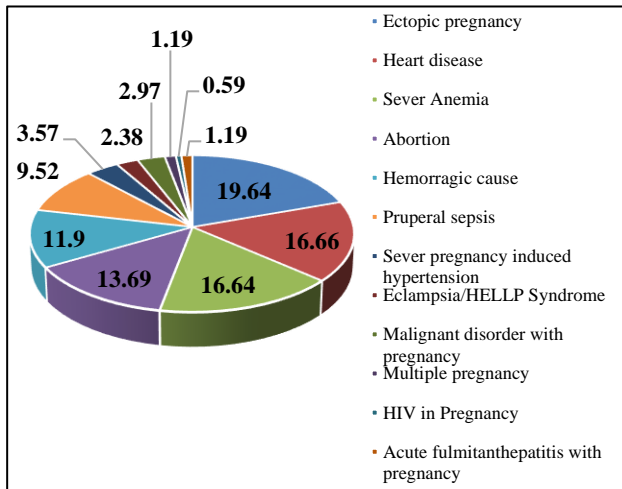


Figure 3: Frequency of obstetric emergencies.

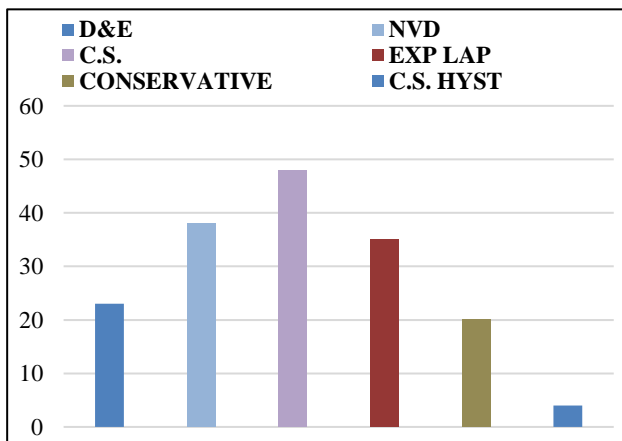


Figure 4: Distribution of cases according to mode of delivery.

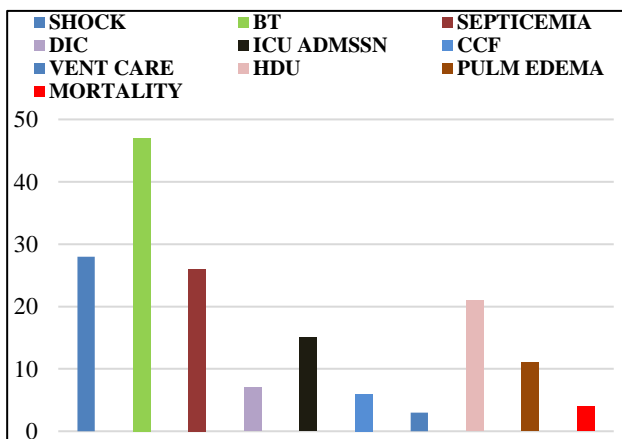


Figure 5: Distribution of cases according to maternal outcome.

Figure 5 shows the maternal out come in terms of complications that include blood transfusion done in (27.99%) of patients. It included patients with shock due to post-partum haemorrhage, ruptured ectopic, other causes include Purpureal sepsis, Abortion, Antepartum haemorrhage, Severe anaemia with pregnancy.

Septicaemia (septic abortion, puerperal sepsis) was present in (15.48%) of cases. Patient admitted in ICU (8.92%), HDU (12.5%), (1.78%) needed ventilatory support. Pulmonary oedema was present in (6.54%) and CCF (3.57%) of patients. Maternal death in (2.38%) of patients.

Figure 6 shows that out of 102 deliveries (after excluding Abortion, Puerperal sepsis, Ectopic pregnancy) live birth (58.8%), NICU admission (27.45%), Ventilatory support (7.84%) and dead born (5.88%).

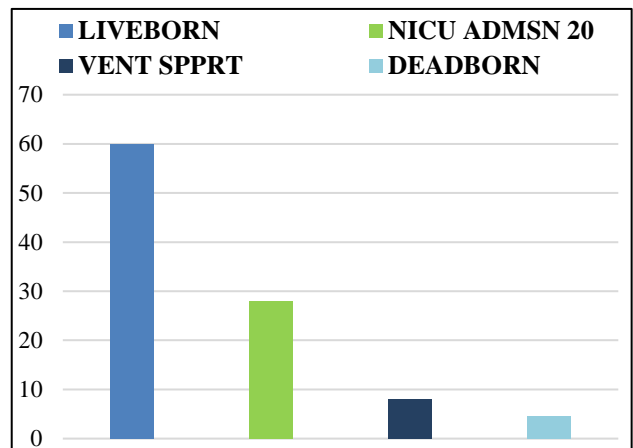


Figure 6: Distribution of cases according to perinatal outcomes.

DISCUSSION

This study shows that obstetric emergencies were relatively common in this centre and unbooked patient constituted substantial bulk of cases. The World Health Organization estimates that at least 88-98% of maternal deaths can be averted with timely access to existing, emergency obstetric care using effective and efficient referral system.⁵

Timeliness and appropriateness of referral are a challenge to obstetricians, since the delay in referral affects the maternal and perinatal outcome adversely. Hence identification of at risk patients and obstetric emergencies and timely referral is of immense importance. The proportion of referred cases at our tertiary care centre was (63%). Puri Alka et al, in their study noted (24%) of cases were referred.⁶

In present study, maximum number of patients (73.2%) were in the 20-30 years of age group. Morsheda Banu et al, on assessing the overall age distribution found that

majority 74% of the respondents were between 20-35 years.⁷

In this study, maximum number of patients (64%) were multigravida. Jyoti Bindal et al, also found the maximum number of patients (50%) were multi-gravida but study done by Gupta PR et al, found (52.17%) Primi-gravida and Goswami P et al, also found that majority (47%) were primi -gravida.^{8,9}

In this study, majority of patients referred for ectopic pregnancy (19.64%) followed by Heart disease with pregnancy (16.64%), Severe Anaemia (16.64%), Abortion (13.69%), Haemorrhagic cause (11.90%), Purpureal sepsis (9.52%), Hypertensive disorder (5.95%) and Malignant disorder with pregnancy (2.97%). Maskey S et al, showed in a study that most common diagnosis at referral was medical disorders complicating pregnancy (38%) among which Cardiac disease accounted for 20% followed by Hypertensive disorder (17%).¹⁰ Ruptured Ectopic pregnancy with haemorrhagic shock, Abortion with severe Anaemia, Severe Anaemia with cardiac failure, Organic heart disease with failure and acute fulminant hepatitis with encephalopathy, severe pregnancy induced hypertension and Eclampsia, Purpureal sepsis, Malignant disorder with pregnancy were medical emergencies during antenatal period. Common emergencies during labour were in the form of placental site bleeding. Postpartum haemorrhage and Purpureal sepsis and hepatic encephalopathy were reported during post-natal period. 65% of obstetrical emergencies required some form of surgical interventions. Caesarean section (28.57%) had done in this study similar to study conducted by Goswami P et al, (28%).⁸

In the present study (8.92%) cases admitted to obstetric ICU and (1.78%) need ventilatory care and (12.5%) need HDU admission. Divya Goswami et al, found that (8.02%) needed ICU admission.¹¹

In present study haemorrhagic cause (16.68%), Cardiac disorder leading to cardiac failure and pulmonary oedema (10.11%), Septicaemia (15.48%) due to higher prevalence of septic abortion constitute majority of death among the direct cause. Borchert M et al, found obstetric haemorrhage (32.2%) and infection (31.6%) as the leading cause of maternal death.¹²

In present study, maternal death occurred in (2.38%). Jyoti Bindal et al, also found in their study that maternal death occurred in (2.2%).¹³

In present study perinatal outcome was just satisfactory (60.8%) had live births and (5.88%) were still born. Rehana Najam et al, found (65.2%) had live birth and 34.76% were still born.¹⁴ The perinatal death rate was also significantly higher in un booked than booked patients (5 death in 106 un booked patients verse 1 death in 62 booked patients).

CONCLUSION

Wide spectrum of complicated obstetric cases referred to our tertiary care hospital. Ectopic pregnancy, Heart disease with pregnancy, Abortion include septic and incomplete, severe anaemia, Purpureal sepsis, Eclampsia /HELLP and malignant disorder with pregnancy were the commonest cause of referral which need to be given special attention. Nursing personnel and community health workers must be trained in identification of high risk pregnancies. There must be referral of high risk cases for their early and timely management. Health education and awareness by mass media and non-government organizations can improve the health and social status of women in this country.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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