



NEAR MISS CASES IN OBSTETRICS IN TERTIARY CARE CENTER, SRIKAKULAM

Obstetrics & Gynaecology

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ABSTRACT

Background: Obstetrics near miss is an important indicator that reflects the quality of obstetrics care in a health facility. It assesses and monitors the activities aimed at the prevention of maternal mortality. Aim and objective of this study were to find out the incidence, prevalence, and causes of maternal near-miss cases due to severe obstetrics complications. **Methods:** This is a retrospective study done in the department of obstetrics and gynaecology at Great Eastern Medical School and Hospital, Srikakulam. The study was done during a period from June 2021 to June 2022 **Results:** In this study, authors found the most common morbidity was (40%) hypertensive disorders of pregnancy, (32%) cases of major obstetric hemorrhage, Post-abortion sepsis (4%), Complete heart block (4%), and post-operative pulmonary embolism(4%). There were 2 maternal deaths during the study period, with a mortality rate of 8%. **Conclusions:** Hypertension and Obstetric hemorrhage disorders are the leading causes of Near miss cases. Prompt diagnosis and adequate management of near-miss cases can reduce mortality rates.

KEYWORDS

Hypertensive disorders, Maternal mortality, Obstetric hemorrhage, Severe acute maternal morbidity

INTRODUCTION

- Severe maternal morbidity," a phrase coined by Mantel et al. also called as "near-miss," is defined as A severe life-threatening obstetric complication necessitating an urgent medical intervention in order to prevent the likely death of the mother.(1)
- Maternal mortality is an important indicator of maternal health. MMR reached up to 167 deaths per 100,000 live births in 2013 in India.(2)
- Recent WHO systematic review, the global prevalence of SAMM(Severe Acute Maternal Morbidity) varies from 0.01 to 8.23%.
- The prevalence of SAMM necessitating urgent medical intervention can be as high as 8.23% in India (WHO).
- The incidence of high-risk pregnancy is approximately 15% in India. Every 5 min, one woman dies from a pregnancy-related complication in India.
- Critical care services are important for this subset of obstetric patients and critical care unit(CCU) admission may be considered an objective marker of severe maternal morbidity.
- The purpose of this study was to determine the causes and outcomes of admissions of obstetric patients to the ICU in GEMS, ragolu.
- Complications may arise during pregnancy or in the postpartum period which can be life-threatening and require intensive care. When such complications arise in obstetric patients, early intervention and treatment on a multidisciplinary basis, in the ICU can alleviate the progression of organ dysfunction and improve prognosis. (3)
- Hypertensive disorders of pregnancy with their associated complications have been found to be the most common reasons for ICU admissions.

MATERIALS AND METHODS:

- This was a retrospective descriptive study of consecutive obstetric patients admitted to the ICU in GEMS over a 1 year period from JUNE 2021 to JUNE 2022.
- Data relevant to the obstetric patients were extracted from the admissions and discharges register of the ICU and the case files of the individual patients. Information retrieved contained age, parity, co-morbidities, obstetric history, prenatal care status, mode of delivery, and vital signs on admission in the ICU.
- Other information retrieved for patients pertaining to ICU interventions were mechanical ventilation, oxygen therapy, blood products transfusion, antihypertensive treatment, and inotropic support.

RESULTS:

Table 1: No. of ICU Admissions:

Group	No. of cases
Total deliveries	1800

Total obstetric admissions to ICU	25
OBSTETRIC ADMISSIONS TO ICU/1000 deliveries	2.5
Primigravida	14
Multigravida	11
Mean age of obstetric admissions	25+/-5 years

Table 2: Causes of ICU admission:

DIAGNOSIS DURING ICU ADMISSION	NUMBER OF PATIENTS ADMITTED	PERCENTAGE
Obstetric hemorrhage	5	20%
Eclampsia	6	24%
Severe preeclampsia with HELLP	4	16%
Jaundice complicating pregnancy	2	8%
Post-operative pulmonary embolism	1	4%
AV heart block, pacemaker insertion	2	8%
Post abortion sepsis	1	4%
Ruptured Ectopic pregnancy	3	12%

Table 3: OBSTETRIC HEMORRHAGE AND OUTCOME:

DIAGNOSIS	TREATMENT	OUTCOME
Obstructed labor with PPH massive hemorrhage, DIC, shock	4 units PRBC, 2 FFP, inotropes	Expired after 2 days on ventilator
Placenta previa spectrum complicating pregnancy -2	2 cases proceeded for Cesarean hysterectomy	Survived
Huge cervical fibroid complicating pregnancy-1	Proceeded for cesarean hysterectomy	Survived
Large fibroid complicating pregnancy-2	Elective LSCS done, 2 units packed RBC transfused	Mother & fetus doing well

Table 4: INTERVENTION DONE IN NEAR MISS CASES:

PROCEDURE DONE	NUMBER OF CASES	SURVIVED
Invasive ventilation	3	1
Noninvasive ventilation	20	20

Both invasive & non invasive	1	1
Central venous catheterization	3	3
Pace maker insertion followed by emergency LSCS	2	2
Hemodialysis	1	1

DISCUSSION:

- The mean age and the age distribution of the critically ill obstetric patients in the present study correlate with other contemporary Indian studies, but studies from abroad report a higher maternal age.
- Although advanced maternal age has not been shown to be uniformly associated with CCU admissions and a median age of 30 years is consistent with birth age patterns in developed countries, the noteworthy point in Indian studies is the need of critical care in the patients well under thirty. Socioeconomic factors, early age of marriage, poor access to antenatal services (4)
- Hypertensive disorders in pregnancy were seen in patients. 6 patients presented with eclampsia while 4 patients presented with severe pre-eclampsia with HELLP syndrome.
- One of the patients with severe pre-eclampsia also presented with hemolysis elevated liver enzymes and low platelet (HELLP) syndrome.
- Three of the patients were mechanically ventilated.
- Mean duration of mechanical ventilation was 3 days. two of the mechanically ventilated patients died. Inotropic support with dopamine was given to 5(20.30%) of the patients.
- suboptimal obstetric care in certain remote parts of the country may all contribute to this.
- Unlike studies reporting a higher percentage of multiparous admissions, our study reports a higher percentage of primigravida. This probably correlates with a high percentage of patients admitted with PIH complications in our CCU, primiparity being a recognized risk factor of PIH. Although our study had an unusually high representation of postpartum patients, postpartum predominance is almost uniform among all studies from India and other countries. (5,6)

CONCLUSION:

- Although obstetric patients need critical care to constitute a small fraction of pregnant patients, maternal health is a priority domain for any nation, and hence, strengthening critical care services to save high-risk obstetric patients is of paramount importance.
- The Adequate number of general critical care beds and dedicated obstetric HDUs are essential necessities in high-volume obstetric centers.
- A structured general critical care training for obstetric residents, and regular interdisciplinary meetings with critical care, obstetric, and other relevant specialties may raise the standards of obstetric critical care.

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