Original Research Article

A study to evaluate outcome of pregnant women admitted to ICU: A retrospective study

T U Bendale[1*], A K Bhirud[2]

[1,2]Associate Professor, Department of OBGY, Dr Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, INDIA.
Email: tubendale@yahoo.com

Abstract

Introduction: Pregnancy is associated with physiological and anatomical changes that usually occur uneventfully in majority of women. However, these changes can cause major maternal morbidity with potential catastrophic consequences. **Objective:** To evaluate the distribution of cases and outcome of admissions in OBG ICU. **Methodology:** The present study is a retrospective study .It was conducted in a Ulhas Patil Medical College and Hospital OBG ICU. The study was conducted for a period of one year. All consecutive patients admitted to OBG ICU who were consenting were included in the study. **Results:** The mean age of participants was 28.15±4.51 years, Post-partum hemorrhage was the most important cause for admission in ICU with 23.14%. The mortality was 16.67% in the patients admitted to ICU. **Conclusion:** Hence, we conclude that hemorrhage and pregnancy-related hypertension with its complications are the two common indications for ICU admissions.

Keywords: Pregnancy, ICU.

[*]**Address for Correspondence:**
Dr. T U Bendale, Associate Professor, Department of OBGY, Dr Ulhas Patil Medical College and Hospital, Jalgaon, Maharashtra, INDIA.
Email: tubendale@yahoo.com
Received Date: 12/06/2015 Revised Date: 20/07/2015 Accepted Date: 18/08/2015

Access this article online

Quick Response Code:

Website: www.medpulse.in

DOI: 02 September 2015

INTRODUCTION

Pregnancy is associated with physiological and anatomical changes that usually occur uneventfully in majority of women. However, these changes can cause major maternal morbidity with potential catastrophic consequences. In spite of huge advances in Modern Obstetrics, most women still complete pregnancy uneventfully, but a few of them develop complications that may require ICU admissions. Inadequate knowledge about the illness and infrequent admission of the obstetric patients results in high mortality and morbidity. WHO states that, "there is a story behind every maternal death or life-threatening complication".[1] So a better knowledge of the spectrum, characteristics, and outcomes of the disease involving this group of patients is the first step towards achieving prevention and hence, reduction of both maternal morbidity and mortality.[2] Care of the critically ill parturients is a unique challenge in obstetrics particularly because of its unpredictability. Haemorrhage, toxaemia, anaemia and septicaemia are common causes of mortality and morbidity in these patients.[3] Obstetric critical care in developing countries, however, continues to be radically different from developed countries.[4] Very few studies in India have attempted to evaluate the course of obstetric admissions in ICU.

OBJECTIVE

To evaluate the distribution of cases and outcome of admissions in OBG ICU.

MATERIALS AND METHODS

The present study is a retrospective study. It was conducted in a Ulhas Patil Medical College and Hospital OBG ICU. The study was conducted for a period of one year. All consecutive patients admitted to OBG ICU who were consenting were included in the study. Consenting eligible cases were identified and enrolled within 24 hours of onset of symptoms. LAMA (Left against Medical Advice and Unwilling patients were excluded from the study. A total of 102 patients included in the study. A pre designed and pre designed questionnaire was formed to collect data. The data collected included basic demographic data, obstetric and medical history, status

How to site this article: T U Bendale, A K Bhirud. A study to evaluate outcome of pregnant women admitted to ICU: A retrospective study. *MedPulse – International Medical Journal* September 2015; 2(9): 488-490. http://www.medpulse.in (accessed 04 September 2015).

before hospital admission, hospital course, ICU course, treatment taken and the specific interventions done. The data was analyzed using SPSS Version 17. The outcome of patients was classified as Improved, recovered and dead.

RESULTS

Table 1: Demographic profile among patients

Variable		No. of Patients (n=102)	Percentage
Age	≤20	18	17.64
	21-30	76	74.51
	≥31	08	07.85
Literacy	Educated	56	54.90
	Uneducated	46	45.10
Background	Urban	19	18.63
	Rural	83	81.37

In the study, majority of patients were in age group 21-30 years (74.51%) The mean age of participants was 28.15 ±4.51 years. The literacy among patients showed that 45.10% were uneducated and 81.37% patients were from rural area.

Table 2: Causes of ICU admission

Cause	No. of Patients	Percentage
PPH	28	27.45
Severe Anemia	17	16.67
ECLAMPSIA	18	17.65
HYPERTENSION	09	08.82
IUD	12	11.77
Abortion	08	07.84
Others	10	09.80
Total	**102**	**100**

In the present study, Post-partum hemorrhage was the most important cause for admission in ICU with 23.14% of cases and the second cause was closely shared by Eclampsia (17.65%) and Severe Anemia (16.67%).

Table 3: Outcome of Patients among ICU admissions

Outcome	No. of Patients	Percentage
Improved	49	48.04
Recovered	36	35.29
Dead	17	16.67
Total	**102**	**100**

In our study out of 102 patients 17 patients died in ICU. The mortality was 16.67% in the patients admitted to ICU.

DISCUSSION

A total of 102 patients admitted to obstetrics ICU were part of the study carried for 1 year. The overall incidence of ICU admission was 9% of 1318 deliveries. The occurrence of ICU admissions among obstetric patients was highly dependent on local and institutional factors in the management of these critically ill patients, and that could explained why the ICU admission rates vary in different reviews. Institutional capabilities and the frequency and acuity of serious obstetric complications largely determine the need for critical care[5]. The relative high incidence of admission in our study can be due to the seeking admission at the critical stage after exhausting all primary and secondary hospitals thus worsening the case. Most of the patients belonged to younger age group with the mean age 28.15 ±4.51 years. Our study showed higher incidence than a study by Poornima *et al*[6]. Only 34.9% of admissions were antepartum which is in agreement with the observations (22.1-62.4%).[6] Most of the admissions are due to obstetric as compared to non-obstetric indications. This is similar to the study reported by Vasquez *et al*.[7] The most common admission diagnosis was postpartum hemorrhage with 23% and closely followed by Severe Anemia and Eclampsia. This was similar to a study by Poornima B *et al*[6] which showed 27%.The mortality rate was found to be more in the hemorrhage group (56.4%) as compared to the hypertension group (32.2%). Early detection and timely appropriate intervention can avoid or minimize the effects of these complications. Among patients with obstetric hemorrhage, majority had postpartum as compared to antepartum hemorrhage. It remains unclear if we can attribute this mortality to our statistics, given the critical condition and the poor prognosis of the patient on arrival to our institution. This can be also attributed due to poor awareness about the disease severity by the community late referral from the peripheral centers, delay in transportation, and delay in initiation of the treatment. This high mortality rate may be reduced by health education, training care-givers to identify high risk cases, training obstetricians in basic emergency care, and early referral to higher centers where multidisciplinary personnel are available.

CONCLUSION

Hemorrhage and pregnancy-related hypertension with its complications are the two common indications for ICU admissions in our study. Studying the near miss cases may help to modify the hospital processes for timely and better obstetric or medical interventions. Health education should be imparted about pregnancy complications to the community. Early recognition of high-risk cases and appropriate referral can improve clinical outcome. In the case of pregnancy related emergencies a multi-disciplinary team approach is mandatory.

REFERENCES

1. Making pregnancy safer. WHO Regional Office for Europe. [Last accessed on 2015 Sep]. Available from:http://www.euro.who.int/pregnancy .

2. Leung NY, Lau AC, Chan KK, Yan WW. Clinical characteristics and outcomes of obstetric patients admitted to the intensive care unit: A 10-years retrospective review. Hong Kong Med J. 2010; 16:18–25.
3. Gilbert TT, Smulian JC, Martin AA, Ananth CV, Scorza W, Scardella AT, et al. Obstetric admissions to the intensive care unit: Outcome and severity of illness. Obstet Gynecol. 2003;102:897–903.
4. Naylor DF, Jr, Olson MM. Critical care obstetrics and gynecology. Crit Care Clin.2003; 19:127–49.
5. Zeeman GG, Wendel GD, Jr, Cunningham FG. A blueprint for obstetric critical care. Am J Obstet Gynecol. 2003; 188(2):532–536.
6. Poornima B. Ramachandra Bhat, Mahesha H. Navada, Sujaya V. Rao, and G. NagarathnaEvaluation of obstetric admissions to intensive care unit of a tertiary referral center in coastal India Indian J Crit Care Med. 2013 Jan-Feb; 17(1): 34–37.
7. Vasquez DN, Estenssoro E, Canales HS, Reina R, Saenz MG, Das Neves AV, et al. Clinical characteristics and outcomes of obstetric patients requiring ICU admission. Chest. 2007; 131:718–24.

Source of Support: None Declared
Conflict of Interest: None Declared