



RETROSPECTIVE ANALYSIS OF OBSTETRIC EMERGENCIES REFERRED TO A TERTIARY CARE CENTER IN INDIA

Obstetrics & Gynaecology

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ABSTRACT

Background: Life-threatening events associated with pregnancy are called Obstetric emergencies and they can occur at any time during pregnancy, labor, delivery, or even after delivery. Timely and proper obstetric care saves lives of the pregnant women and their babies daily, throughout the world. Complications of childbirth cannot be prevented in some cases but they can be treated promptly and effectively. Lack of facilities at primary health care centers can result in significant maternal and neonatal morbidity and mortality in such cases. This study aims to identify the various obstetric emergencies referred to a tertiary care center and the different reasons for such referral. **Methods:** This retrospective clinical descriptive study was carried out in the Tertiary Health Care Centre (Sheth Vadilal Hospital, Ahmedabad, Gujarat, India) recruiting a total of 100 patients who presented with various obstetric emergencies from September 2013 to September 2015. **Results:** 86% of patients were between 21 to 30 years of age. The highest number of indication of referral was due to anaemia(15%), followed by previous caesarean section(12%), preeclampsia(11%), meconium-stained liquor(10%), preterm rupture of membranes(9%), oligohydramnios (7%), postdate(5%), malpresentation (6%) and Obstructed labour(4%). Other indications of referral were cord prolapse (1%), maternal diabetes (1%), polio(1%) and cardiac disease(1%). The main reasons for referral to higher centers included a lack of OT facilities and blood products. The cost factor is responsible especially in those cases who are referred from the private sector. **Conclusions:** Regular antenatal care can help prevent many obstetric emergencies. Improvement of health care in women before pregnancy can go a long way in preventing all pregnancy complications including a majority of obstetric emergencies. Also, better health facilities and trained staff at Primary Health Care Centre are vital for improved delivery of maternal and child health care services.

KEYWORDS

Obstetric Emergencies, Health Care Facilities, Maternal Morbidity

INTRODUCTION

Pregnancy and childbirth are major events in the life of a woman. Life-threatening events in pregnancy are called Obstetric emergencies and they can occur at any time during the course or even after delivery. It is imperative that professionals providing care to pregnant women follow a structured approach to emergencies and a proper and prompt referral system.

The maternal mortality ratio (MMR), expressed as maternal deaths per 100,000 live births over a given period, is a major measure of the quality of obstetric care. Maternal mortality accounts for over quarter of a million deaths annually [1]. Obstetric emergencies (OE) 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. [2-4] Management of obstetric emergency needs multidisciplinary care often involving anaesthetic, paediatric, haematology colleagues, and other health care professionals with inputs from various specialties and appropriate infrastructure.

It is now universally recognized that the most effective strategy for reduction in maternal mortality is to provide emergency obstetric care services (EmOC) within the reach of all pregnant women [5]. It has been argued that the presence of an appropriately skilled obstetric care service provider at childbirth, backed up by a transportation facility in emergency case referrals if required, is perhaps the most critical intervention for making motherhood safer [6].

This study aimed to analyze the Obstetric emergencies referred to a tertiary care center to find out the types of cases and reasons for referral.

MATERIALS AND METHODS

The present study was a retrospective clinical descriptive study carried out in the Tertiary Health Care Centre (Sheth Vadilal Hospital, Ahmedabad, Gujarat, India) recruiting a total of 100 patients who presented with various obstetric emergencies from September 2013 to September 2015.

Inclusion Criteria

1. Women with obstetric emergencies referred in first and second

stage of labour

2. Obstetric emergencies in third stage of labour such as retained placenta, postpartum haemorrhage, and postpartum collapse
3. All pregnant women with the documented need for emergency care while pregnant or within 42 days of labour irrespective of gestation were included in the study.

Exclusion criteria

Pregnant patient without any obstetrical emergency.

Data Collection-

The collection of relevant data was done using a standard obstetric proforma. Data were analyzed using SPSS version 20. Descriptive statistics were used for calculations.

RESULTS AND DISCUSSIONS

A total of 100 obstetric emergencies, admitted and treated in the department of Obstetrics and Gynecology at Smt. NHL Municipal Medical College, Ahmedabad, India, from 1st October 2013 to 30th September 2015, were included in the present study.

Table 1: Maternal age group

Age in years	No of patients		
	Present study	Afshan et al	Najam et al
16-20	06 (6%)	08%	17.33%
21-25	62 (62%)	38%	41.56%
26-30	24 (24%)	34%	28.19%
31-35	06 (6%)	14%	9.32%
36-40	02 (2%)	06%	
41-45	0	0	3.60%
	100%	100%	100%

Out of 100, 86% of patients were from 21 to 30 years while in the study done by Afshan et al [7] they make up 72% and Najam et al [8] make up 69.75% of the study population. (Table 1) This age group reflects the peak reproductive age group; hence this is an expected finding, in view of peak reproductive potential. In a study done by Dipali et al [2], the maternal age ranged from 20 to 40 years, maximizing between 21 to 30 years of age, which again is similar to our findings.

Table 2: Indication for Referral

Indication for referral	No of patients		
	Present study (n=100)	Ayesha et al (n=234)	Hiteshree et al (n=155)
Ectopic	02%	-	-
Rupture uterus	02%	-	-
Anaemia	15%	-	12%
Previous caesarean	12%	15%	06%
PIH	11%	27%	16%
MSL	10%	78%	05%
PROM	09%	-	-
Oligohydramnios	07%	-	-
Postdate	05%	-	07%
Breech	04%	-	-
Eclampsia	04%	-	-
NPOL	04%	-	23%
Obstruction	04%	-	-
Placenta previa	01%	-	01%
Abruption	02%	-	02%
PPH	02%	-	-
Others	06%	-	-

[NPOL= Nonprogress of labour; PPH= Postpartum Haemorrhage; PIH= Pregnancy induced hypertension; MSL= Meconium stained liquor; PROM= Prelabor rupture of the membranes]

In the present study, the commonest indication of referral is due to anaemia (15%). This may not only be due to the unavailability of blood transfusion facilities in case of severe anaemia at PHC/CHC but also cost factor in case of referral from private sectors.

Following anaemia, a previous caesarean section (12%) is a major indication of reference. This is comparable to a study done by Ayesha et al [9] 15% while in the study done by Hiteshree et al [10] indication of reference for previous caesarean section is only 6% about 50% lesser than above both studies.

Obstructed labour was responsible for 4% of the patient the referral to tertiary care hospital. This is also preventable morbidity by early diagnosis through proper monitoring of labour at CHC/PHC level. Partogram is a very useful tool for monitoring. So paramedical staff at PHC/CHC can also monitor the progress of labour and timely referral can be made before the mother goes into obstructed labor.

Referrals also included pre-eclampsia (11%), meconium stained liquor (MSL) (10%), preterm rupture of membranes (9%), oligohydramnios (7%), postdate (5%) and malpresentation (6%) in present study, while in the study done by hiteshree et al, indications included preeclampsia (16%), MSL (5%), postdate (7%), malpresentation (15%).

In another study by Jyoti et al [11], the maximum number of patients referred were for anaemia (25.13%) followed by hypertensive disorders (16.45%) and hemorrhage (13.18%).

Table 3: Reason for referral

Reason for referral	Present study (n=100)	Maskey S study (n=112)
Lack of blood products	23	6
Lack of operation theatre facility	24	4
Financial reasons	22	-
Lack of intensive care and multi-specialty units	8	26
Lack of required expertise and surgical skill	13	13
No peri-natal facilities	Others 10	27
Obstetric complications		25
No improvement		8
No USG		3

The main reasons for referral to higher centers in our study included a lack of OT (operation theatre) facilities and blood products which may be responsible for more number of patients with previous caesareans and anaemia being referred to tertiary care hospitals. The cost factor was also responsible especially in those cases who were referred from the private sector.

Conversely, reasons for referral in Maskey S [12] study based in Nepal, differed to some extent as compared to our study. Unavailability of the

perinatal facility was the most frequent reason for referral, followed by no physician availability, obstetric complications, lack of obstetrics/gynaecology facility, surgery facility, ultrasound availability, blood transfusion, and no improvement.

A comparison of these studies highlighted the regional differences in health care facilities and various challenges faced by the caregiver and the care receiver.

SUMMARY

In our study, the majority of patients are between the ages of 21 to 25 years (62%). The main indication of referral was anaemia (15%) followed by previous caesarean section (12%), Pregnancy Induced Hypertension (11%), Meconium Stained Liquor (10%), Premature Rupture Of Membrane (9%), Oligohydroamnios (7%). The main reasons for referral to higher centers included Lack of OT facility, lack of blood products, and financial reasons.

CONCLUSION

Maternal and foetal morbidity and mortality are indicators of available health services in any country. Focusing on the improvement of the general health of reproductive age group women can significantly reduce complications in pregnancy. Also improving infrastructure and facilities in rural and remote areas will help cut down maternal and fetal morbidity and mortality to a great extent. Most of the maternal deaths can be prevented by timely diagnosis and interventions, either during pregnancy, labour, or postpartum period. Access to high-quality health care that people need without suffering financial hardship is a human right and this can be made possible by strengthening the referral system, increasing the number of trained personnel, and establishing tertiary care centers which provide good maternal and neonatal care.

REFERENCES

- [1] Trends in maternal mortality: 2000 to 2017: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization; 2019.
- [2] PRASAD, Dipali et al. Review of obstetrical emergencies and fetal out come in a tertiary care centre. International Journal of Research in Medical Sciences, [S.1.], v. 6, n. 5, p. 1554-1558, apr. 2018. ISSN 2320-6012. Available at: <https://www.msjournal.org/index.php/ijrms/article/view/4844/3880>. doi:http://dx.doi.org/10.8203/2320-6012.ijrms20181467.
- [3] Woyessa AH, Cafo JM, Palanichamy T. Magnitude Characteristics Maternal and Feto-Neonatal Outcomes of Obstetric emergencies in Western Ethiopia. Gynecol Obstet Reprod Med 2020;26(2):101-09 doi:10.201613/GORM.2019.936
- [4] L. Ebrim, B. Lagiri and O. Buowari, "Postpartum Haemorrhage Following Unsupervised Labour: The Role of the Anaesthetist," Open Journal of Anesthesiology, Vol. 2 No. 5, 2012, pp. 202-204. doi: 10.4236/ojanes.2012.25046.
- [5] Sikder SS, Labrique AB, Ali H, Hanif A, Klemm R, Mehra S, et al. Availability of emergency obstetric care (EmOC) among public and private health facilities in rural northwest Bangladesh. BMC Public Health. 2015;15(1):36.
- [6] Ransom E, Yinger N. Making Motherhood safer: Overcoming Obstacles in pathway to Care. Population Reference Bureau; 2002.
- [7] Ambreen, A., Khurshid, S., Khurshid, M., Khan, F., & Intisar, A. (2012) Obstetrics Outcome of Cases Referred to Tertiary Care Hospital after Trial of Labour. Annals of King Edward Medical University, 18(1), 71. https://doi.org/10.21649/akemu.v18i1.379
- [8] Najam R, Gupta S, Chowdhury H. Pattern of obstetrical emergencies and fetal outcomes in a tertiary care center. Acta Med Int [serial online] 2015 [cited 2022 May 26];2:105-10. Available from: https://www.actamedicainternational.com/text.asp?2015/2/1/105/209428
- [9] Ayesha. An audit of obstetrics referrals to Abbasi shaded hospital. Pak Journal of Surgery. 2011;27(4):304-8.
- [10] Patel HC, Singh BB, Moitra M, Kantharia S. OBSTETRIC REFERRALS: SCENARIO AT A PRIMARY HEALTH CENTRE IN GUJARAT.
- [11] Bindal J, Agrawal N, Sharma DC. Over view of referred obstetric patients and their outcome in tertiary case Hospital. JMSCR. May 2017;5(5).
- [12] Maskey, S. (2015). Obstetric Referrals to a Tertiary Teaching Hospital of Nepal. Nepal Journal of Obstetrics and Gynaecology. 10. 52. 10.3126/njog.v10i1.13197.