

Original Research Article

A STUDY ON ANALYSIS OF OBSTETRIC REFERRALS TO A TERTIARY CARE HOSPITAL

Pagadala Sri Venkateswara Mohana¹, T. Prathibha Sravanthi², R. Umadevi³, A. Madhulika³

¹Post Graduate, Department of Obstetrics & Gynecology, Sri Venkateswara Medical College, Tirupati, AP, India.

²Associate Professor, Department of Obstetrics & Gynecology, Sri Venkateswara Medical College, Tirupati, AP, India.

³Assistant Professor, Department of Obstetrics & Gynecology, Sri Venkateswara Medical College, Tirupati, AP, India.

Received : 10/02/2024
Received in revised form : 22/04/2024
Accepted : 08/05/2024

Corresponding Author:

Dr. A. Madhulika

Assistant Professor, Department of
Obstetrics & Gynecology, Sri
Venkateswara Medical College,
Tirupati, AP, India.
Email: drmadhu87@gmail.com

DOI: 10.5530/ijmedph.2024.2.42

Source of Support: Nil,

Conflict of Interest: None declared

Int J Med Pub Health

2024; 14 (2); 204-207

ABSTRACT

Background: Adequate facilities for deliveries and for managing high risk pregnancy cases may not be available at all hospitals along with round the clock working staff. This study was done to identify the types of cases being referred and to study reasons for referral to tertiary care setup for management.

Material and Methods: This prospective study was conducted over a period of 3 months in the Department of Obstetrics and Gynaecology, Government Maternity Hospital, Tirupati and included a total of 417 cases who were referred to this tertiary care center for further management. The following variables were analysed like age, birth order, referring facility, reasons for referral.

Results: Most of the patients were from rural background. 20-40 years aged women were predominant. Primigravida women were mostly being referred. The maximum number of cases were referred from the nearby area hospitals. Previous history of cesarean section and premature rupture of membranes were the most common reasons for referral.

Conclusion: Strengthening of the health care facilities and proper training of the staff so that they can decide when to refer and whom to refer can reduce the maternal mortality and morbidity significantly.

Keywords: Pregnancy, Primary health care, Referral system, Tertiary hospital.

INTRODUCTION

Pregnancy and parturition are complex physiological processes that require higher medical care. In developing countries, high maternal and neonatal mortality rates have been reported due to lack of adequate facilities and staff required for managing normal as well as high risk patients. Lack of qualified birth attendants, low educational attainment, low social status of women, poverty, women's financial dependence, and delaying medical treatment are the main causes of poor maternal outcomes.^[1]

Critically ill individuals are occasionally referred late and in a moribund condition because of a lack of awareness on when to be referred. Linking the basic, secondary, and tertiary levels of treatment is a crucial component of primary health care and is dependent on the promptness and appropriateness of referrals, which in turn affects the patients' final outcome.^[2]

"Referral" implies to "any upwards movement of health care seeking individuals in the health system".^[3] A referral system connects the various

levels of the healthcare system with a well-established communication transport infrastructure. A referral ought to be viewed as an active process that starts at the patient's door and, assuming the patient makes the brief trip to the referral facility, ends back there. While the majority of obstetric complications—which are classified as acute diseases such as postpartum hemorrhage, sepsis, eclampsia, and obstructed labor—can be managed with prompt administration of an evidence-based package of therapies known as emergency obstetric care.^[4]

Theoretically, a timely screening and transfer of pregnant women at risk under favorable conditions might reduce the rate of maternal death significantly.^[5] We need to evaluate this referral system in order to design medical and community-based interventions for mother and child more effectively. In order to ascertain the frequency and epidemiological profile of obstetric referrals in a South Indian tertiary care center and to identify the primary indications for such transfers during the labor and delivery phases, we carried out this study.

MATERIAL AND METHODS

The study was carried out after getting approval from Institutional Scientific and Institutional Ethics Committee.

An observational study was conducted over a period of 3 months, i.e. from December 2023 to February 2024, in the Department of Obstetrics and Gynaecology, Government Maternity Hospital, Tirupati.

Obstetric referrals during the study period were analyzed for reasons for referral, nature of referring facility, parity and residential area of patient. Demographic details of the patients along with a complete general and obstetric examination was done for all referred patients.

The data was collected, compiled and analyzed using Microsoft Excel. Ethical committee approval was taken prior to the commencement of the study.

RESULTS

A total of 417 cases were referred to this tertiary health care center.

The mean age of study population was 27.8 ± 2.3 years, with the majority of women belonging to 20-30 years of age group. [Table 1]

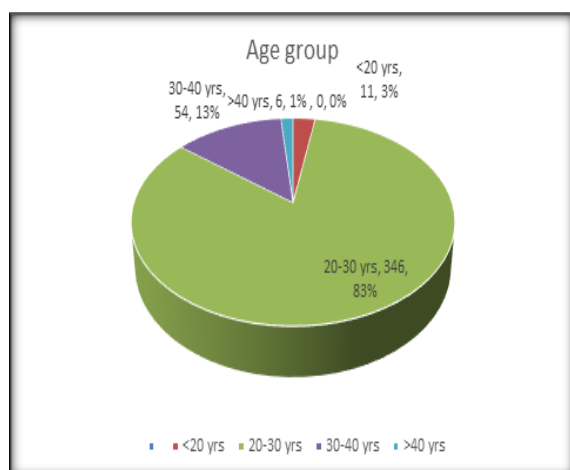


Figure 1:

Most of the women were residing in the rural areas where access to higher health care facilities is scarce i.e 312 cases contributing to 74.8%. [Table 2]

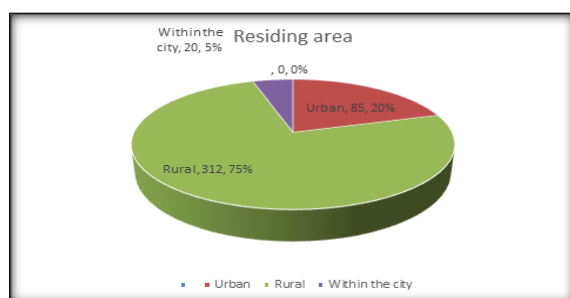


Figure 2:

Most of the women who were referred were primigravida (62.1%). [Table 3]

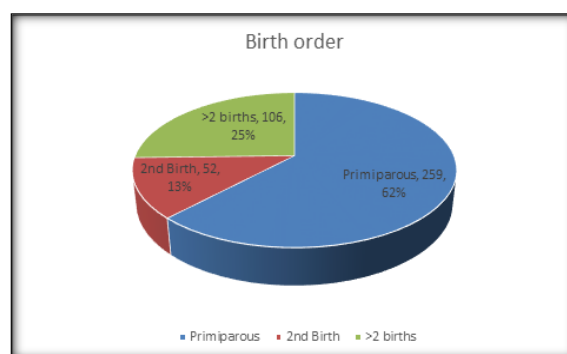


Figure 3:

Most common cause for referrals is 1 prior LSCS followed by premature rupture of membranes. [Table 3]

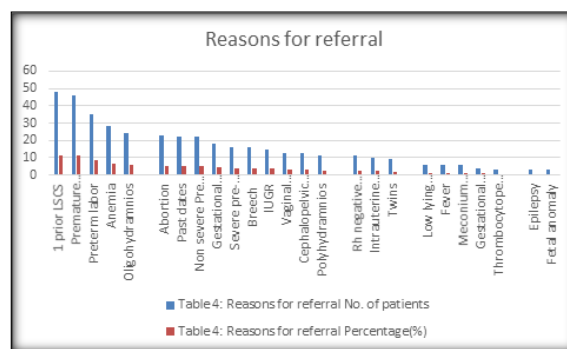


Figure 4:

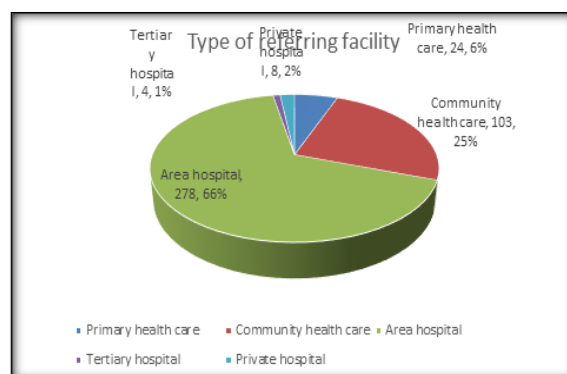


Figure 5:

Most of the referrals are from area hospital i.e 66.7% (278). [Table 4]

Table 1: Age wise distribution of patients

Age	Number	Percentage
<20yrs	11	2.8%
20-30yrs	346	82.9%
30-40yrs	54	12.7%
>40yrs	6	1.6%

Table 2: Type of residing area

Type	No. of patients	Percentage
Urban	85	20.38
Rural	312	74.8
Within the city	20	4.7

Table 3: Birth order

Birth order	No. of patients	Percentage (%)
Primiparous	259	62.1
2nd Birth	52	12.4
>2 births	106	25.4

Table 4: Reasons for referral

Reason	No. of patients	Percentage(%)
1 prior LSCS	48	11.5
Premature rupture of membranes	46	11.03
Preterm labor	35	8.39
Anemia	28	6.7
Oligohydramnios	24	5.7
Abortion	23	5.5
Past dates	22	5.2
Non severe Pre-eclampsia	22	5.2
Gestational hypertension	18	4.3
Severe pre-eclampsia	16	3.8
Breech	16	3.8
IUGR	15	3.5
Vaginal exploration	13	3.1
Cephalopelvic disproportion	13	3.1
Polyhydramnios	11	2.6
Rh negative pregnancy	11	2.6
Intrauterine death	10	2.3
Twins	9	2.1
Low lying placenta	6	1.4
Fever	6	1.4
Meconium stained liquor	6	1.4
Gestational diabetes	4	0.9
Thrombocytopenia	3	0.7
Epilepsy	3	0.7
Fetal anomaly	3	0.7

Table 5: Type of referring facility

Type	No. of patients	Percentage (%)
Primary health care	24	5.7
Community health care	103	24.7
Area hospital	278	66.7
Tertiary hospital	4	0.9
Private hospital	8	1.9

DISCUSSION

In this study, a total of 417 patients were referred over 3 months period to the Department of Obstetrics and Gynaecology, Government Maternity Hospital, Tirupati.

Most of the patients were in 20-40 years of age group (94%). This is in concordance with studies done by Gupta et al⁶ (82.9%) and Morsheda et al,^[7] (74%). However, Devneni et al⁸ reported that only 64% were from this age group.

Most of the women who were referred were primigravida (62.1%). However, Gupta et al⁶ and

Morsheda et al,^[7] et al reported a lower incidence of primigravida women (52.1% and 50% respectively).

In present study, most of the patients were referred in view of premature rupture of membranes and previous history of lower segment cesarean sections. Gupta et al,^[6] reported anemia, hypertensive disorders of pregnancy and mal-presentations as the most common cause of being referred to tertiary care center. Rath et al,^[9] reported hypertensive disorders of pregnancy, followed by preterm labor, as the most common cause of referral. Maskey et al,^[10] reported medical comorbidities during pregnancy as the most common cause of referral.

CONCLUSION

In addition to transportation and the referral center, proper referrals also require feedback and communication between the referring and referral facilities. Particular procedures for identifying cases that are complex and high-risk. Teamwork and trained staff are required to select the right cases for referral. It is necessary to maintain unified records. Strengthening peripheral hospitals is necessary to handle complex cases.

Acknowledgements: the authors would like to thank the staff at Department of Obstetrics and Gynaecology for extending their invaluable support in conducting this study.

Conflicts of Interest: Nil

Strength of Study

This study was carried out in a tertiary care hospital to which most of the cases from nearby 4-8 districts were referred.

Limitations of Study

The study was done only for a period of 3 months, can be done over a period of 1-2 years.

REFERENCES

1. Shilpa SB, AnandPK. Study of obstetric referral to teaching institute, Indian J Appl Res 2013;3(7):469-71. Gupta PR, Chaudhari SN, Gonnade NV. Maternal and fetal outcome in referred patients to tertiary care centre, Sch J App Med Sci 2016;4(5C):1624-1631.
2. Jain DrV, Jain DrS. A study on referred obstetric cases in a tertiary care hospital in central India. International Journal of Clinical Obstetrics and Gynaecology [Internet]. 2020 Nov 1 [cited 2024 Apr 30];4(6):100-3. Available from: <https://www.gynaecologyjournal.com/articles/740/4-5-47-542.pdf>
3. Jahn A, De Brouwere V. Referral in pregnancy and childbirth: concepts and strategies. Safe Mother Strateg Rev Evid (Studies in HSO&P). 2001.
4. World health organization. Monitoring the building blocks of health systems: a hand book of indicators and their measurement strategies. Geneva: WHO 2010
5. Chelli D, Dimassi K, Zouaoui B, Sfar E, Chelli H, Chennoufi MB. Évolution de la mortalité maternelle dans un maternité tunisienne de niveau 3 entre 1998 et 2007. J Gynecol Obstet Biol Reprod (Paris). 2009 Dec;38(8):655-61. PubMed | Google Scholar
6. Gupta PR, Chaudhari SN, Gonnade NV. Maternal and fetal outcome in referred patients to tertiary care center. Sch J App Med Sci. 2016; 4:1624-31.
7. Morsheda B, Shamsun N, Hashima EN. Assessing the MANOSHI Referral System Addressing Delays in Seeking Emergency Obstetric Care in Dhaka's Slums. MANOSHI Working Paper Series No. 10.2010; Manoshi-WP10:1-36 published by ICDDR, B, BRAC. 2010.
8. Devineni K, Sodumu N. A study of spectrum of referral pattern at a tertiary teaching hospital towards better obstetric case, IAIM 2016;3 (8):193-198.
9. Rathi N, Gupta S, Chowdhury H. Pattern of obstetrical emergencies and fetal outcomes in a tertiary care centre. Acta Medica International. 2015;2(1):105-110.
10. Maskey S. obstetric referrals to a tertiary teaching hospital of Nepal. NJOG 2015;19(1):52-56.
11. Sorbye Ki, Vangen S, Onoko O, Sundby J, Bergsjø. (2011). BMC pregnancy and childbirth caesarean section among referred and self-referred birthing women: a cohort study from a tertiary hospital north eastern Tanzania. 11(55).
12. Borchert M, Goufodji S, Ali honou E, Delvaux T, Saizonou J, Kanhonou L, et al. Can hospital audit teams identify case management problems analyze their causes, identify and implement improvements? A cross sectional process evaluation of obstetric near miss case reviews in Benin BMC pregnancy Child birth 2012; 12:109.
13. Nagavarapu S, Shridhar V, Kropp N, Murali L, Balachandra SS, Prasad R, et al. Reasons for obstetric referrals from community facilities to a tertiary obstetric facility: A study from Southern Karnataka. J Fam Med Prim Care. 2019 Jul;8(7):2378-83.
14. Indranil D, Priyanka R, Subhendu D, Mahamud K, Payel S. Obstetrics referrals: Maternal and perinatal outcome in medical college hospital in eastern India. Indian J Obstet Gynecol Res. 2020 May 29; 2020:10719.
15. Roy P, Dutta I, Dasgupta S, Khan M, Saha P. Obstetrics referrals: Maternal and perinatal outcome in medical college hospital in eastern India. Indian J Obstet Gynecol Res. 2020 Feb 28; 7:91-9.
16. Ghardallou M, Limam M, Khelifi A, Khairi O, Khairi H, Mtiraoui A, et al. Obstetric referrals to a tertiary care maternity: a descriptive study. Pan Afr Med J. 2019; 33:306.
17. Das S, Patil S, Pathak S, Chakravarthy S, Fernandez A, Pantvaitya S, et al. Emergency obstetric referrals in public health facilities: A descriptive study from urban Maharashtra, India. Front Health Serv. 2023; 3:1168277.