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### RESEARCH ARTICLE

#### REASONS OF REFERRAL IN OBSTETRIC REFERRED WOMEN

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#### Abstract

**Background:** There is often lack of awareness and absence of routine antenatal care. The serious patients report late and hence referrals are delayed. Timely and appropriate referral plays a key role in the outcome of the women. Referral services are an important part of antenatal services.

**Method:** The study included 220 referred obstetric cases. Reasons for referral were evaluated and data compiled.

**Result:** Medical disorders in pregnancy were the leading cause of antenatal referrals, with anaemia and hypertensive disorders each accounting for 34.88% of cases. Labour complications led to 81 referrals, mainly due to premature rupture of membranes (43.21%) and abnormal presentations (23.46%). Post-delivery referrals were mostly for postpartum hemorrhage (66.67%) and hematoma (33.33%). Blood transfusion need varied, depending on the cause.

**Conclusion:** Improving antenatal care, thus early diagnosis of anaemia can decrease the referral cases. Timely referral of hypertensive disease or other medical disorders could prevent the disease becoming severe and improve pregnancy outcomes.

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#### Introduction:-

An important indicator of maternal health is maternal mortality and is reflective of the health care services. Most maternal mortalities are due to obstetric reasons and can chiefly be reduced with access to proper health services including delivery by presence of trained birth attendant.<sup>1</sup> It is suggested to refer all pregnant woman with hypertension, diabetes mellitus, severe anaemia or previous caesarean section, abnormal presentation like breech or transverse lie and multiple gestation in the antenatal period itself to a higher centre where all complications can be treated.<sup>2</sup>

There is often lack of awareness and absence of routine antenatal care. The serious patients report late and hence referrals are delayed. Timely and appropriate referral plays a key role in the outcome of the women.<sup>3</sup> Referral services are an important part of antenatal services.<sup>4</sup> This study aimed to assess the reasons of tertiary care hospital referrals. This could help decrease the number of referrals by evaluating the causes, early management at peripheral level and referral before complications arise.<sup>5</sup>

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**Method:-**

This observational, prospective analytical study was performed at SMS Medical College, Jaipur, from November 2022 to October 2023. Ethical approval was obtained. The study included 220 referred obstetric cases. Women who expired before treatment could be initiated were excluded. Reasons for referral were evaluated and data compiled.

**Results:-**

The age of the referred women was 27.7 years (mean), majority (37.27%) were in the 26-30 years age group. 74.09% had primary or secondary education, while only 8.64% were graduates. The majority of participants were Hindu (87.73%). 62% belonged to the lower middle socio-economic class or below. Additionally, 64.55% of the women resided in urban or urban slum areas.

Analysing the period of referral, it was observed that 60.45% were antepartum, 36.81% intra partum, 2.7% post partum.

In the antepartum period, the most common reasons were medical disorders, previous lower segment caesarean section (26.32%), placenta previa (12.03%) and oligohydramnios (9.77%). Other reasons include twin pregnancies, polyhydramnios, Rh-negative pregnancies, intrauterine growth restriction and congenital anomalies, each accounting for approximately 6.67% of cases. These findings help find the prevalence of high risk pregnancies, necessitating specialized care and management. Table 1

**Table 1:-** Reasons of Referral in Antenatal Period.

High Risk Pregnancy	Number (Total=133)	%
Medical Disorders	43	32.33
Previous LSCS	35	26.32
Placenta Previa	16	12.03
Oligohydramnios	13	9.77
Twin pregnancy	6	4.51
Polyhydramnios	6	4.51
Rh Negative Pregnancy	6	4.51
Intrauterine Growth Restriction	6	4.51
Congenital Anomaly	2	1.50

Medical disorders in pregnancy, the most common reason for referral in antenatal period included anaemia and hypertensive disorders including eclampsia, accounting for 34.88% each, liver disorders in 16.28% women, while both thrombocytopenia and respiratory disorders each were seen in 6.98% women. These highlight the common medical challenges encountered during pregnancy among the referred women. Table 2

**Table 2:-** Medical Disorders in Women Referred in Antenatal Period.

Medical Disorders in Pregnancy	Number	%
Anaemia	15	34.88%
Hypertensive Disorder including Eclampsia	15	34.88%
Liver Disorders	7	16.28%
Thrombocytopenia	3	6.98%
Respiratory Disorders	3	6.98%

Complication during labour were the reason for referral in 81 women. Premature rupture of membranes was the most frequent complication, occurring in 43.21% of cases. Abnormal presentation was seen in 23.46%, with non-progression of labour, cephalopelvic disproportion, and meconium-stained liquor each accounting for between 6.17% to 8.64% women. Postdatism and obstructed labour are less common, each occurring in approximately 4.94% to 6.17% of cases. Table 3

**Table 3:-** Reasons of Referral During Labour.

Labour Complications	Number of woman (n=81)	Percentage %
Premature rupture of membrane	35	43.21
Abnormal Presentation	19	23.46
Non progression of labour	7	8.64
Cephalo pelvic disproportion	6	7.41
Meconium stained liquor	5	6.17
Postdatism	5	6.17
Obstructed Labour	4	4.94

Referral post-delivery was in 6 women. Postpartum haemorrhage was the predominant reason, occurring in 66.67% of cases, and hematoma in 33.33% of cases. Table 4

**Table 4:-** Reasons of Referral in Post-Partum Women.

Reason	Number (n =6)	Percentage %
Post-partum haemorrhage	4	66.67
Hematoma	2	33.33

### Discussion:-

Analysing the period of referral in the women referred it was observed that there was 60.45% antepartum, 36.81% intra partum, 2.7% post partum. In 39% of women, previous caesarean section was the chief cause of referral. They were referred to higher centre due to non availability of obstetricians, anaesthetist, trained staff or lack of basic amenities or even lack of operation theatre .

Medical disorders in pregnancy were the most common reason for referral in antenatal period. These highlight the common medical challenges encountered during pregnancy among the referred women.

According to Ambike et al , the commonest cause of referral was pre-eclampsia in 20% women and 11% had eclampsia.<sup>6</sup> In a study of Busumani and Mundagowa found that 18.4% pregnancies were hypertensive.<sup>7</sup> Das et al in 2023 also assessed that pregnancy-induced hypertension or eclampsia were the commonest causes of referral (17%).<sup>1</sup>

In their study Narendra and Shree in 2019 observed that women with obstetric complications were as high as 77.34% and hypertensive disorders of pregnancy was the major risk factor for ICU admission. These findings highlight the variety and prevalence of conditions that classify pregnancies as high risk, necessitating specialized care and management.<sup>8</sup>

Preeclampsia was the cause of referral in 16% women as noted by Patel HC et al.<sup>9</sup> However, Goswami et al observed anaemia (27.86%) followed by hypertensive disorders of pregnancy (17%) to be the major reasons of referral to their tertiary care centre.<sup>10</sup>

Early management of anaemia and timely referrals of the women with these medical disorders helps in decreasing their severity, improving both the maternal and foetal outcome.

Complication during labour was the reason for referral in 81 women. The various challenges and complexities that arise during the labour process, requiring appropriate management and intervention. Patel et al in 2012 found that 64.5% of referrals were during the intrapartum period. 23.9% were referred during the antepartum period cases and only 11.6% were delivered women .The common reasons for referral were non progression of labour (14.8%), severe anaemia (10.3%), hypertensive disease in pregnancy (10.3%), abnormal presentation (9.7%) and postpartum haemorrhage (9.7%).<sup>9</sup>

Study done by Kant et al in 2018 found that preterm labour (30.6%).<sup>9</sup> The most common cause of referral was premature rupture of membranes as found by Mahendra et al (2019).<sup>12</sup>

Reasons for complications and referral post-delivery was in 6 women. Sabale and Patankar in 2015 studied the maternal and perinatal outcome by reviewing the obstetric referred cases. They found postpartum haemorrhage to be the major complication in the immediate postpartum period.<sup>12</sup> In 2022, Prakash et al reported that PPH, septicaemia, wound gaping and puerperal pyrexia were reasons of postpartum referral.<sup>13</sup>

Since improvement in maternal health care services, most high risk cases are referred timely. Hence the postpartum referral cases have decreased significantly.

### **Conclusion:-**

The referral system faces challenges due to late identification and inadequate management of complications at lower healthcare levels. Anaemia and hypertensive disorders were major causes of antenatal referrals, while labour complications like premature rupture of membranes and abnormal presentations were common. Post-delivery referrals were mostly due to postpartum hemorrhage.

Strengthening antenatal care services, timely referrals, better transport, and improved resources at primary healthcare levels can enhance maternal and neonatal outcomes.

### **Limitation Of The Study**

This study was performed in a single tertiary centre, thus it may not be representative of whole state or community.

### **Declarations**

#### **Funding:**

Funding sources were none

### **Conflict Of Interest:**

None to be declared

### **Ethical Approval:**

The study was approved by the Institutional Ethics Committee

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