

## Fetomaternal Outcome In Referral Obstetric Cases In A Tertiary Care Hospital: A Retrospective Study

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**Abstract:** This study was to review the pattern of obstetric cases referred to tertiary care centre, to identify their clinical course, mode of delivery and fetomaternal outcomes. **Material & Methods:** This is a retrospective study conducted at Gopnath Maternity Home, Sir T Hospital, Bhavnagar from December-2018—May2019. All referred obstetric cases were included. **Result:** In my study, maximum numbers of patients (52.17%) were in the 20-30 years of age group. Majority of the referral cases were primigravida 104(50.24 %) out of 207 referred cases, 173(83.57%) delivered, 22(10.62%) were treated conservatively. In 12 patients (5.79%) either abortion occurred or medical termination of pregnancy was done or ectopic pregnancy. Out of the 173 cases who delivered at our institute majority of the babies were delivered 110(63.58%) normally, while 63(36.41%) underwent caesarean section. There were 43 NICU admissions, and 130 were healthy babies. Reasons for admission were varied. In the present study, a pre-eclampsia and related condition was the most common cause of referral. This is followed by premature rupture of membranes and preterm labour, previous C-section being the next most common. **Conclusion:** This study has shown that improper antenatal and intranatal care at the peripheral level is responsible for poor maternal and perinatal outcome. Strengthening of peripheral health care system and early referral needs to be implemented for better maternal outcome. [Vasava M Natl J Integr Res Med, 2019; 10(5):93-96]

**Key Words:** Fetomaternal outcome, Tertiary care hospital, Retrospective study

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**Introduction:** Due to lack of awareness and absence of regular antenatal care, the critically ill patients are referred late and sometimes in moribund conditions with multiple organ damage. Timeliness and appropriateness of referral is an important factor in the ultimate outcome of the patients<sup>1</sup>. Referral services for identification and referral of high risk pregnancies are an integral part of maternal and child health services. For a large majority of developing countries this aspect of health system remains weak<sup>2</sup>.

Although most obstetric complications such as acute conditions such as postpartum haemorrhage, sepsis, eclampsia, and obstructed labour that can cause maternal death cannot be predicted, the majority can be treated with timely provision of a package of evidence-based interventions known as emergency obstetric care<sup>3-5</sup>. The availability of EmOC is considered to be an indicator of how well a health system is prepared to manage conditions leading to acute maternal morbidity and mortality<sup>6,7</sup>. EmOC refers to elements of obstetric care needed for management of complications during pregnancy, delivery and postpartum period, skilled personnel, equipment and support services.

EmOC services are of paramount importance in reducing maternal mortality and morbidity<sup>8</sup> It is still recommended to electively refer pregnant

woman with previous caesarean section, breech presentation, transverse lies, multiple gestation, hypertension and severe anaemia for delivery before any complication arise to a health care centre where all the facilities to deal with the complications are available<sup>8</sup>. With this background present study was undertaken to evaluate the maternal and perinatal outcome in referred cases at tertiary care hospital.

**Material And Methods:** **Study Design:** Retrospective study. **Study Period:** Dec 2018 to May 2019 (6 months) **Study Population:** All obstetric cases referred to the department of obstetrics and gynaecology of Gopnath Maternity home, SIR T Hospital, Bhavnagar during the study period.

**Data Collection:** 1. The study data was collected from case sheets of patients referred and managed at our hospital. 2. Detailed clinical history, place of referral, cause of referral was studied. 3. Complete physical and obstetric examination was done and relevant investigations were done. 4. Management of the patient, clinical course, mode of delivery (vaginal or operative or conservative) and maternal outcome was documented. 5. To know perinatal outcome, APGAR score was noted, if needed NICU admission cause for it was noted. Descriptive statistics like percentages were used for analysis.

**Result:** Secondary data analysis of referred obstetrics case slips to Gopnath maternity home, SIR T HOSPITAL was done. Copy of all referral slips had been preserved and studied retrospectively. After thorough analysis of data following observations are put forward.

A total of 207 cases were referred to the higher centre due to various reasons. Maximum numbers of cases in present study were in the age group of 20-30 years comprising 52.17% of total cases.

**Table 1: Age Distribution**

<20 Years	61
20-30 Years	108
>30 Years	38

Majority of the referral cases were primigravida 104 (50.24%).

**Table 2: Parity-Wise Distribution**

Primigravida	104
Multigravida	90
Grand multipara	13

Out of 207 referred cases, 173 (83.57%) delivered, 22 (10.62%) were treated conservatively.

In 12 patients (5.79%) either abortion occurred or medical termination of pregnancy was done or there was ectopic pregnancy or tears which were managed according to set protocol depending upon the gestational age at diagnosis.

**Table 3: Outcome of the Referred Obstetrics Cases**

Outcome Of Obstetrics Cases	No. Of Cases	Percentage
Delivered	173	8.57
Abortion/Ectopic	12	5.79
Conservative	14	10.62
Total	207	100

Out of the 173 cases who delivered at our institute majority of the babies were delivered vaginally 110(63.58%), while 63 (36.41%) underwent caesarean section.

**Table 4: Mode of Delivery**

Vaginal Delivery	110
Lscs	63

Out of 173 deliveries, there were 43 NICU admissions and 130 were healthy neonates. Reasons for admission were varied.

**Table 5: Reasons for NICU Admission**

Reason For Admission	No. Of Cases	Percentage
Preterm Care	17	39.53
Meconium Aspiration Syndrome	08	18.60
Jaundice	05	11.62
Sepsis	01	2.32
Transient Tachypnoea Of Newborn	01	2.32
Low Birth Weight	04	9.30
Asphyxia+ Death	04	9.30
Hypoglycaemia	03	6.97
Total	43	100

In the present study, Pre-eclampsia and related conditions was the most common cause of referral. This is followed by premature rupture of membranes and preterm labour being the next common cause.

**Table 6: Causes Of Referral**

Pre-Eclampsia And Related Condition	34
Prom	29
Preterm Labour	27
Antepartum Haemorrhage	25
Previous Caesarean Section	21
Post Date	11
Anaemia	10
Postpartum Haemorrhage	07
Malpresentation	07
Foetal Distress	07
Non Availability Of Blood	05
Non Availability Of Doctor	05
No Details	05
Cephalopelvic Disproportion	04
Meconium Stain Liquor	04
Cardiac Disease	04
Ectopic	02

**Discussion:** Labour is a physiological process, but it carries an inherent risk of complications. In present study, maximum number of patients (52.17%) were in the 20-30 years of age group and maximum referral were pre-eclampsia (16.42%), premature rupture of membrane (14.00%), preterm labour pain (13.04%) followed by antepartum haemorrhage (12.07%) were the

major causes of referral to the tertiary care hospital. Patel HC et al in their study found that causes of referral were pre-eclampsia (16%) and meconium stained liquor (5%)<sup>9</sup>. Sabale et al in their study found that preeclampsia and related conditions were a major indication for referral (25.79%)<sup>10</sup>. Rathi Charu et al noted that a majority of the cases were referred for preeclampsia and related conditions (26%), preterm labour (26%) and medical disorders complicating pregnancy (21%)<sup>11</sup>.

Previous caesarean sections were the cause of referral in 10% of cases in the present study which is similar to the study conducted by Goswami P et al (6%) [8], Khatoun A et al (15%)<sup>12</sup> and Gupta PR et al (7.62%)<sup>1</sup>. The patients with previous caesarean section are referred to higher centres from PHC/CHC due the unavailability of operation theatre, gynaecologist, anaesthesiologists, trained staff or basic infrastructure deficit<sup>8</sup>.

In present study, 30.43% referred cases underwent caesarean section so, we can conclude that rate of caesarean section is substantially high in referred cases.

Poor nutritional status and inadequate spacing of pregnancy compounded by inability of poor patients to have adequate diet due to economic reasons leads to high rate of anemia in pregnancy.

Unavailability of blood transfusion facilities in case of severe anemia at PHC'S and CHC'S may also contribute to such high percentage of patients being referred to our tertiary care hospital. In present study, 53.14% referred cases had vaginal delivery (either spontaneous or induced), 30.43% had caesarean section and 10.62% cases were managed conservatively.

The commonest indication of caesarean section amongst referred patients was pre-eclampsia and related condition.

Delay in referral is a big contributing factor for adverse maternal outcome. The leading cause of maternal morbidity amongst referred cases in our study was hypertensive disorders, their complications (16.42%) haemorrhage.

**Conclusion:** Peripheral health care system needs to be strengthened and practice of early referral needs to be implemented for better maternal

outcome. Health education to the community, better antenatal care up to grass root level, emergency intranatal care, availability of services of skilled birth attendants at the time of child birth, well organized first referral centre with better transportation facility, availability of blood round the clock, anaesthetic facilities and availability of specialist in the field of obstetrics at the referral unit will definitely reduce maternal morbidity and mortality.

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