

A Study of intra uterine fetal demise at tertiary care centre

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Abstract

Background: Intrauterine fetal demise is most traumatic event in both parents and the treating obstetrician. Many a times cause cannot be identified, but when cause of IUFD is found, an effective plan can be plotted to prevent the same during future pregnancy.

Aim: To study the etiological factors and other determinants of IUFD.

Methodology: This study was prospective observational study in the department of obstetrics and Gynaecology at Basaveshwar teaching and general hospital between September 2020 to September 2022. During 2-year study period 80 cases of IUFD were recorded. Maternal data was analysed for studying demographic profile, parity, no of antenatal visits, associated obstetric complication, medical disorders complicating pregnancy, mode of delivery and possible causes of IUFD.

Results: Among 80 cases of IUFD, majority of cases are multigravida (n=52cases) while primigravida were (n=28cases). Hypertensive disorder of pregnancy was most common cause of IUFD. Abruptio placenta was most common obstetric complication associated with IUFD.

Conclusion: In the present study, the most common cause of IUFD was hypertensive disorder complicating pregnancy. Lack of regular ANC checkups was major other determinant contributing to IUFD. A most of the fetal wastage can be prevented by early detection of medical disorders complicating pregnancy and regular antenatal checkups.

Keywords: IUFD, Hypertensive Disorder, Abruptio Placenta

Introduction

Intrauterine fetal demise is most traumatic event in both parents and the treating obstetrician. Its distressing when

it occurs without warning in a pregnancy that has previously seemed entirely normal. Every year, nearly 3.3 million IUFDs occur world - wide, nearly as many as postnatal deaths, but received less attention. Of them 97% occur in developing countries.¹ Foetal death occurring after 20 weeks of gestation is called as intrauterine foetal death (IUFD). Early IUFD occurs when the foetus dies before 24 weeks of pregnancy, and late IUFD occurs when the foetus dies after 24 weeks.² Better understanding of pathophysiology and new techniques of diagnosis have led to identification of probable cause of death in greater number of cases than in past. Intrauterine fetal demise in patients with eclampsia, pre eclampsia, diabetes, post-maturity are preventable by good antenatal care. A most of the fetal wastage can be prevented by early detection of medical disorders complicating pregnancy and regular antenatal check ups. IUFD can be used to assess the level of antenatal and intra natal care.³

As a preventive measure, health education is given to promote the utilization of available antenatal care services, family planning, and genetic counselling.

Materials and methods

This study is a prospective observational study conducted in the department of obstetrics and Gynaecology at Basaveshwar teaching and general hospital between September 2020 to September 2022. Intra uterine fetal deaths and still births, defined as fetal demise after 20 weeks of gestation were included under study.

During 2 year study period 80 cases of IUFD were recorded.

Detailed history of patient was collected and analysed for studying demographic profile such as age, parity, referred case, booked or un booked case, no of antenatal

visits, associated obstetric complication such as antepartum haemorrhage, anemia, malpresentation and medical disorders complicating pregnancy.

Data regarding mode of delivery and associated maternal complications like sepsis, disseminated intravascular coagulation were recorded. Fetal outcomes recorded included fresh/macerated still birth, sex of the baby, weight, congenital malformations and birth injuries. Finding of placenta like infraction, calcification and retroplacental clot and of conditions of cord like knots, cord around neck and any other abnormality were also recorded.

Results

During the period of this study, 80 cases of IUFD were recorded. 62 cases (49.6%) were referral cases and 06 cases were unbooked with lack of regular antenatal checkup. In this study, incidence of IUFD was 27.77.

Majority of patients were aged less than 30 years (80%) and 20% were more than 30 years.

Majority of the cases (n=52) were multigravida (65%) and 35% were primigravida (n=28).

62 cases (77.5%) presented with complaints of not appreciating fetal movements and 12 cases (15%) as decreased fetal movements. Others presented as pain abdomen in 5 cases and pv leak in 1 patient.

In our study history of previous IUD was noted in 3.75% of cases. Other determinants included unbooked cases with lack of antenatal check ups, low socioeconomic status.

54 cases were recorded between 28 to 36 weeks of gestational age followed by 15 cases (37 to 42 weeks) and 11 cases less than 28 weeks of gestation.

In our study, hypertensive disorder complicating pregnancy (n= 29) is most common etiological factor leading to intrauterine fetal demise.

Out of 29 cases, most women presented as preeclampsia(n=16)and others are Eclampsia(n=08), gestational hypertension (n= 05).

In 20 cases, etiology could not be identified.

16 patient had antepartum haemorrhage , out of which 15 had abruptio placenta and 1 case of placenta previa. 4 cases were twin pregnancy, out of which 3 cases were twin gestation with single fetal demise and 1 case was twin pregnancy complicated by TTTS.

Other obstetric complication leading to IUFD were cord prolapse, breech presentation, oligohydramnios and febrile illness

72 cases were delivered by vaginal delivery and 08 patient underwent LSCS.

16 cases were fresh still birth and 64 were macerated.

Maternal complications noted are DIC and sepsis one case each and 24 cases were transfused with blood.

A. Maternal Characteristics

Table 1: Depicting Age Distribution

Age	No. of cases	Percentage
< 20 years	10	12.5
21-25 years	30	37.5
26-30 years	24	30
>30 years	16	20

Table2: depicting distribution of cases according to parity

Parity	No.of cases	Percentage
Primigravida	28	35
Multigravida	52	65

Table 3: depicting distribution of cases according to gestational age

Period of gestation	No. of Cases	Percentage
<28weeks	11	13.75
28-36 weeks	54	67.5
37 -42 weeks	15	18.75

Table 4: causes of intra uterine fetal demise

Causes	No. of Cases	Percentage
Gestational HTN	05	6.25
Preeclampsia	16	20
Eclampsia	08	10
Abruptio placenta	15	18.75
Idiopathic	20	25
Anamalous baby	03	3.75
Twin with TTSS	01	1.25
Cord prolapse	01	1.25
Twin with single fetal demise	03	3.75
Breech presentation	01	1.25
Placenta previa	01	1.25
Febrile illness	01	1.25
Oligohydramnios	05	6.25

Table 5: presenting complaints

Complaints	No. of cases	Percentage
Not appreciating fetal movements	62	77.5

Decreased fetal movements	12	15
Pain abdomen	5	6.25
PV leak	1	1.25

Table 6: mode of delivery

Mode of delivery	No .of cases	Percentage
Vaginal delivery	72	90
Caeserean section	08	10

Table 7: fresh still birth vs macerated babies

	No. of cases	Percentage
Fresh still birth	16	20
Macerated babies	64	80

Table 8: Maternal complications

Maternal complications	No. of cases	Percentage
Blood tranfusions	13	16
Dic	01	1.25
Sepsis	01	1.25
Prolonged hospital stay	4	5

Discussion

Intrauterine fetal demise causes psychological trauma to the patients and their family. Since long various attempts have been made to reduce its occurrence. The incidence of IUFD in India was 24.4-41.9.3.⁴ In this study, incidence of IUFD was 27.77.

One reason of higher stillbirth at our center could be due to the selection bias due to it being a tertiary care referral

center and all major obstetric complication identified in the periphery and other centers would be referred here. Most of the high-risk cases also seek treatment at this hospital only.

Out of which 80 case, cases (49.6%) were referral cases. 80% of patients were aged less than 30 years in our study which is similar to the study by divya et al in which the age group of 26-30 had the highest stillbirth prevalence.⁵

In this study, 7.5% of antenatal cases were un-booked, which was comparable to 5.1% of un-booked in Karale et al.⁶

The parity of the patient influences the pregnancy outcome. In present study proportion of IUFD was higher in multigravida (65%). Korde-NV et al, observed 51.6% of multigravida who had stillbirths.⁷

67.5% of the IUFD occurred between 28 to 36 weeks period of gestation. This is comparable to the study by Patel S et al, 50 (62.5%) were between 25-32 weeks of gestational age.⁸

In our study 77.5% of the patients had presented with absent fetal movements while 15% had come with decreased fetal movements comparable to study done by Tamrakar SR et al, in more than half of the recorded cases (54.7%) the complaint was of reduced or absent fetal movements.⁹

In our study history of previous IUD was noted in 3.75% of caes comparable to study by Singh N et al in which it was 4.05% cases.¹⁰

In our study hypertensive disorders of pregnancy caused 36.25% of the total losses. In a study done by Patel S HDP was found in 33.7% of the cases.⁸ Thus, Hypertensive disorders of pregnancy is the most common etiological factor in maternal causes. Other

high risk factors included twin pregnancy and associated complications responsible for 5% of IUFD.

Others causes include breech presentation, febrile illness and oligohydramnios.

In the placental factors evaluated, abruption was found in 18.75% cases, placenta previa in 1.25% cases and cord prolapse was seen in 1.25% cases. Placental causes, especially placental insufficiency is more likely to recur. Thus, the study of these factors is of paramount importance.

In current study, only 25% cases had no ascertainable cause In a similar study done by Anjali C et al, no risk factor was found in 19.05% of the total cases.¹¹

80% were macerated babies and only 20% were fresh still birth which is in contrast to study by Katherine J. Gold et al in which 33 (70%) fetuses were fresh and 14 (30%) were macerated.¹²

Although 90% had vaginal delivery and abdominal delivery was performed in 10% of the cases comparable to the study done by Jamal S et al where 91% cases were delivered vaginally and 8.92% by Lscs.¹³

Reasons for lscs included abnormal lie, failure of induction.

Duration of hospital stay >7 days was seen in 4.2% patients in Divya et al study while in our study 5% had a prolonged hospital stay.

16% of patient received blood transfusion comparable to study done by Divya et al¹⁴ which is 15%. Disseminated intravascular coagulation and sepsis was found in one patient each.

It is very important to find out the probable and possible cause of fetal demise. IUD risk is higher in a woman with prior still birth and recurrence is also noted with pre-eclampsia and abruption. Modifiable risk factors can be identified early and rectified. Irregular antenatal

visits on the part of the patient, limit the quality of health care. A greater proportion of IUFD is preventable by patient education, attention to the warning signs, regular visits and early referral.

Conclusion

In the present study, the most common cause of IUFD was hypertensive disorder complicating pregnancy. Lack of regular ANC check ups was major other determinant contributing to IUFD.

Early booking, identification of high risk cases, timely intervention and referral are the key approaches to reduce the incidence of IUFD and prevent recurrence.

Health care education should be given to the antenatal mothers and their families.

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