INTRAUTERINE FETAL DEATH CASES AT TERTIARY CENTER

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ABSTRACT

BACKGROUND

Intrauterine fetal death is a tragic event for the parents and a great cause of stress for the caregiver. It is an important indicator of maternal and perinatal health of a given population. This study was undertaken to study the maternal and fetal factors associated with intrauterine fetal death.

Aim and Objective- This was an Analytical study aimed to evaluate and understand the prevalence, socio-epidemiological and etiological factors of IUFD methodology should not be mixed with aims and objectives

MATERIALS AND METHODS

The study was carried out at March 2017 to June 2017 (4 months study) which was conducted at Dr. S. N. Medical College, Jodhpur, Rajasthan. The details were entered in a preformed proforma. IUD is defined as fetal death beyond 20 weeks of gestation and/or birth weight >500g. The details of complaints at admission, obstetrics history, menstrual history, examination findings, per vaginal examination findings, mode and method of delivery and fetal outcomes and investigation reports were recorded.

RESULTS

A total of 227 intrauterine fetal deaths were reported amongst 6264 deliveries conducted during the study period. The incidence rate of intrauterine fetal death was 36/1000 live births. 192 (84.56%) deliveries were unbooked and unsupervised and 133 (58.59%) belonged to rural population and 126 (55.5%) were preterm and 221 (97.55%) were singleton pregnancy. Among the identifiable causes hypertensive disorders (24.22%) and severe anemia (13.10%) were most common followed by placental causes (9.97%). Congenital malformations were responsible for 12.39% and unidentifiable causes were 11.01%. Induction was done in 103 patients, 94 patients had spontaneous onset of labour and caesarean section was done in 30 patients. Incidence of intrauterine foetal demise gradually decreased as parity advanced.

CONCLUSION

Institutional deliveries should be promoted to prevent intrapartum fetal deaths. Decrease in the incidence of IUD would significantly reduce the perinatal mortality. Majority of fetal wastage can be prevented with universal and improved antenatal care.

KEYWORDS

IUFD, Pregnancy, Antenatal Care.

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BACKGROUND

Intrauterine fetal death is a tragic event for the parents and a great cause of stress for the caregiver. This study was undertaken to study the maternal and fetal factors associated with intrauterine fetal death. Intrauterine death (IUD) definition includes antepartum deaths beyond 20 weeks of gestation or birth weight ≥500g when gestation age not known (WHO).[1] An antepartum and intrapartum fetal deaths together constitutes a large portion of perinatal mortality. Antepartum fetal death contributes to 2/3rd of perinatal mortality and major cause of pregnancy wastage. The mode of antepartum and intrapartum surveillance for fetal wellbeing has advanced in last few decades. There are so many maternal conditions and diseases that are responsible for poor obstetrical outcomes. By proper antenatal check-ups, the high-risk cases associated with poor outcomes can be identified.

Aim of this Study- To analyze the maternal conditions associated with fetal death with specific reference to clinical

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presentation of maternal complications and to find the preventable causes of fetal death.

MATERIALS AND METHODS

This was a prospective study aimed to evaluate and understand the prevalence, epidemiological and etiological factor clinical profile of IUFD from March 2017 to June 2017 (4 months study) which was conducted at Dr. S. N. Medical College, Jodhpur Rajasthan. All the women with gestational period beyond 20 weeks to full term pregnancy having normal/malformed fetus were included in the study. The records of babies born below 20weeks of gestation, fetus weighing below 500g were excluded. Pt was thoroughly interrogated and systematically examined and optimally investigated and all findings were recorded on designed proforma. The patients presented with chief complaints of decreased or loss of fetal movements, history of leaking, bleeding per vagina. The obstetrical history included parity, abortions, stillbirth, neonatal death, lower segment cesarian section (LSCS), preterm delivery, antepartum hemorrhage (APH) or any medical disorder in previous pregnancy. Other history include menstrual history, past history, personal history, general examination, local examination findings, per vaginal examination, mode of delivery and investigation reports.

OBSERVATION AND RESULTS

The present study consisted of 227 cases of intrauterine fetal death which occurred during the study period 4 month.

Total Deliveries	6	2	6	4
Total I.U.F.D		2	2	7
Table 1. Shows that Total of 6264, Deliveries were Conducted During this Study Period				

The Incidence of IUFD was 36.23 per 1000 live birth.

Unbooked	192	84.85%
Booked	35	15.15%
Total IUFD	**227**	**100%**
Table 2. Distribution of Cases According Antenatal Booking		

Table 2. Shows there were Total 227 IUFD cases in which 192 (84.58%) cases unbooked and 35 (15.41%) cases booked. Even single antenatal visits were included in booked cases.

Rural	133	58.59%
Urban	94	41.41
Total	**227**	**100%**
Table 3. Distribution of Cases According to Area		

Table 3. Most of the patients belongs rural area 58.59%.

Age (Year)	No. of Cases	Percentage of Cases
<20	9	3.96
20-25	134	59.04
26-30	66	29.08
30-35	10	4.40
36-40	7	3.08
> 40	1	0.44
Total	**227**	**100%**
Table 4. Distribution of Cases According to Maternal Age		

Table 4 shows that Majority of fetal deaths (59.03) occurred in women between 20 to 25 years of age and minority of fetal deaths (0.44%) occured in women above 40 yrs. of age in India majority of women married in this age group (20-25 years).

Parity	No. of Cases	Percentage of Cases
G1	77	33.93
G2	56	24.67
G3	22	09.69
G4	35	15.42
G5	23	10.13
G6	7	3.08
G7	5	2.20
G8	1	0.44
G9	01	0.44
	227	100%
Table 5. Distribution of Cases according to Parity		

In Table 5. The majority 77 (33.92%) of women were primi gravid.

Immunization Status	No. of Patient	%
Immunized	173	76.21
Unimmunized	54	23.79
Total	**227**	**100%**
Table 6. Immunization Status of Patient		

Table 6. During study we observed that 173 (76.21) were immunised and 54 (23.88%) were unimmunized.

H/o abortion	14	6.17
H/O IUFD	23	10.13
Total	37	16.30
Table 7. Distribution of Cases According to Past Catastrophic Obstetric Events		

Table 7. Shows that there was past obstetric history of IUFD in 23 cases and abortion in 14 cases rest (190) were uneventful.

Type of Pregnancy	Numbers	Percentage
Singleton	221	97.35
Twin	6	2.65
Total	**227**	**100%**
Table 8. Distribution of Cases According No. of foetus		

In our study Table 8 shows that majority of pt who were admitted in hospital presented with singleton 221 (97.35) pregnancy while twin pregnancy were 6 (2.655%).

Gestational Age of IUD Fetus in Weeks	No. of Cases	% of Cases
20-26	48	21.15
26-32	50	22.03
32-38	28	12.33
38-42	79	34.80
Post-dated	22	9.69
Total	**227**	**100%**

Table 9. Gestational Age Distribution of IUD Fetus

In Table 9 it was observed that majority of IUD fetuses 79 (34.40%) were from 38 to 40 week of gestation.

About 126 (55.5%) fetus were preterm & rest 101 were term.

Maternal Risk Factor	No. of Cases	% of Cases
Pre eclampsia	44	19.38
Essential hypertension	7	3.08
Eclampsia	4	1.76
Anaemia	28	12.33
Labour complication	6	2.64
Gestational diabetes	3	1.32
Jaundice	3	1.32
Heart disease	2	0.88
Total	**97**	**42.71**

Table 10. Maternal Risk Factor Associated with IUFD

According Table 10. among all maternal factors hypertensive disorder of pregnancy 55 (24.22%) headed the list followed by anemia 28 (12.33%), gestational diabetes (1.32%), jaundice and heart disease.

Fetal Risk Factor	No of Cases	% of Cases
Congenital anomaly	28	12.33
IUGR with severe oligohydramnios	19	8.37
Rh-iso immunization	7	3.08
Multiple pregnancy	6	2.64
Total	**60**	**26.43**

Table 11. Fetal Risk Factor Associated with IUFD

In Table 11. Among all fetal risk factor congenital anomaly 28 (12.33%) most common cause followed by IUGR with oligo. (8.37%), Rh isoimmunisation (3.0%), multiple pregnancy (2.64%).

	No. of Cases	% of Cases
Accidental haemorrhage	21	9.25
Prolonged pregnancy	22	9.69
PORM	9	3.96
Placenta previa	8	3.52
Total	**60**	**26.43**

Table 12. Placenta Risk Factor Associated with IUFD

As shown in table 12 in case of placental risk factors accidental haemorrhage and prolonged pregnancy constituted the bulk followed by PROM and placenta previa. Other causes were multiple risk factors 9 (3.96) and unexplained 25 (10.57).

Mode of Delivery		No. of Cases	% of Cases
Vaginal		197	86.78
Operative		30	13.22
1	LSCS	(25)	
2	Hystorotomy	(2)	
3	Laprotomy for rupture	(3)	
		227	100%

Table 13. Distribution of Cases According to Method of Delivery

Table 13 shows that there were 197 (86.78%) patient delivered vaginally and operative delivery occured in 30 (13.21%), among operative 25 were LSCS, 2 underwent hysterotomy and 3 cases underwent exploratory laparotomy for repair of rupture uterus, and one had forceps delivery.

Gender	No. of Cases	% of Cases
Male	132	58.15
Female	95	41.85
Total	**227**	**100%**

Table 14. Distribution of Cases According to Gender

According table 14 study shows 132 (58.14%) were delivered as male and 95(41.85%) were female.

DISCUSSION

This study consists of 227 IUFD cases amongst 6264 total births. Thus the incidence of IUFD was 36.23/1000 live births.[2,3,4,5] The incidence of IUFD reported from western countries ranges from 4.7% to 12.0%. This is lower than that observed in our study.[6,7] The incidence rate reported from various centers in India is higher 24.4-41.9%.[2,3,4,5] The reason of higher IUFD at our center is, it being a tertiary care center and all high risk and complicated cases are referred to our center. The other reason could be a high number of unsupervised pregnancy due to various reasons like illiteracy, low socioeconomic status and the paucity of monitoring facilities in rural areas. Nutritional deficiency and anemia are leading cause of poor pregnancy outcome, the majority of our patients had anemia. The Increased risk of fetal death is present amongst the teenage group and older women. The western studies also shows increased risk of IUFD in women over 35 years of age. In our study, however, the fetal deaths were more in the age group of 20-30 years. This is because most of the women in India complete the family before 35 years of age. Increased risk of IUFD is seen amongst primigravidas. The incidence is higher amongst women with minimal or no antenatal care. This is also reflected in our study where the rates were highest amongst the unsupervised pregnancies. The incidence of APH in our study was 29 (12.72), which was lower to that reported in other studies. The incidence of intrauterine growth retardation in our study was 19 (8.32%). The others studies have reported the incidence from 2.2% to 18.4%. The incidence of gestational hypertension in this study was 24.22% which is similar to that reported in other studies.[8] The incidence of congenital malformation was 12.33% which was also similar to that reported from other studies.[8] Identification of high risk cases and their timely referral to

higher centers may save the baby. Patient compliance is important in reducing most of these preventable foetal losses. However unexplained cause of IUFD seen in 25 (11.01%) cases. In case of unexplained IUFD fetal autopsy, placental & membrane examination could be helpful for finding out causes and enhance it Pt. should be counselled in a positive way to explore unexplained IUFD.

CONCLUSION

Hypertensive disorder of pregnancy, Anaemia, APH, Congenital anomaly and unexplained cause were leading causes of IUFD. Majority of women who had IUFD were unbooked and had emergency admission and had not received adequate antenatal care. The associated risk factors in a community seems to be preventable, hence we should pay attention to health education with emphasis on antenatal care and its benefit, improved preconceptional environment, nutrition, micronutrient status especially iron and folic acid intake.

Strategies for Prevention

Women should try to optimize their health prior to pregnancy.

Life style modifications.

Good preconception and prenatal care.

Enough folic acid before they get pregnant.

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