



## A STUDY ON PROFILE OF SUDDEN INTRAUTERINE DEATH, IN A TERTIARY CARE HOSPITAL IN WESTERN INDIA.

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**ABSTRACT** **Introduction:** Intrauterine fetal death (IUFD) is a dreaded Obstetrical Complication. It is a great psychological trauma to the pregnant woman and entire family. **Aim:** To find the prevalence, the risk factors, the management of IUFD and to find out measures which can be taken to reduce it. **Materials And Method:** It was a prospective study conducted from Feb 2017 to Oct 2019. **Results:** A total of 144 mothers with IUFD were studied among 23,740 delivered patients over the period of two and half years. Among them 79.2% were unregistered cases, had highest prevalence in age group 21-25. Majority had vaginal delivery 83.4%. Complications of IUFD were DIC (3.4%), sepsis (4.86%) & PPH (3.47%). **Conclusion:** Intrauterine fetal death can be reduced with regular antenatal care and early detection of risk factors and their management.

**KEYWORDS :** Intrauterine fetal death

### INTRODUCTION:

Fetal Death means death prior to complete expulsion or extraction from the mother of the product of human conception irrespective of the duration of pregnancy and which is not an induced termination of pregnancy<sup>(1)</sup>.

The national center for health statistics, USA divides fetal death into three categories<sup>(2)</sup>; Early – less than 20 weeks; Intermediate – 20-27 weeks and Late – more than 28 weeks. WHO introduced the 10<sup>th</sup> revision of the International Classification of diseases which defines the period commencing at 22 completed of gestation (birth weight normally about 500gms)<sup>(3)</sup>.

Intrauterine Fetal death embraces all fetal deaths, including still birth. The definition of stillbirth recommended by WHO for international comparison is a baby born with no signs of life at or after 28 weeks of gestation. Stillbirth is useful index to measure the level of antenatal and intrapartum care.

There is a gradual decline in the incidence of IUD in developed countries. Pre-conceptual care, identification of high risk pregnancy and its management, care during pregnancy and labour, provision for prenatal diagnosis and selective termination in congenital anomalies are the possible reason. The major burden of IUFD is shared by developing countries (98%), prevalence of stillbirth alone globally was 2.6 million, with more than 7178 deaths a day in 2015 (WHO,2020). In our country many of such deaths also remain unreported. Main causes of IUFD reported are foetal causes (25-40%), placental causes (25-35%), maternal causes (5-10%) and in 25-35% causes remain unknown.

### AIM AND OBJECTIVE:

The aim of this study is to know the various etiological factors and maternal conditions associated with IUD and their psychological impact on pregnant women. To find out measures which can be taken to reduce it. To know the impact of effective antenatal care on the incidence of IUD can be known.

### MATERIAL AND METHODS:

The observational study was carried out among all registered and unregistered cases having history of IUD from Feb 2017 to Oct 2019 in VS Hospital, Ahmedabad. 144 pregnant women with IUD fetus were studied who fulfilled all inclusion and exclusion criteria out of 24337 delivered cases.

### Inclusion Criteria:

All diagnosed patients with intrauterine fetal death above 20 weeks of gestation were included or with fetal weight above 500 gms.

**Exclusion Criteria:** All abortions were excluded.

At the time of admission, comprehensive maternal, medical and social history was taken like previous fetal losses, high BP records, GDM, bleeding per vaginum, history of recent illnesses, substance abuse, history of loss of foetal movement, antenatal visits and investigations. Various signs and symptoms were recorded like absence of fetal movement, association with pain<sup>(4)</sup>. The general and obstetric examination was done.

Ultrasound was done for confirmation and written report taken from Radiology department. Patient and the relatives are counselled. All investigations like CBC, LFT, RFT, Coagulation profile, HbA1C and blood grouping with cross matching and Bishop scoring was done. Labour was induced in majority after initial workup was done to cut short the psychological upset in carrying further the pregnancy, however in certain cases expectant management could be done while waiting for natural cervical ripening, but only after vigorous counselling.

Methods of Induction were either Mifepristone 200 mg orally followed by Misoprostol 25 mcg (intravaginally)<sup>(5)</sup> at least 24 hours later followed by 4 hrly repetition or Cerviprime gel which can be repeated maximum up to 2 doses<sup>(4)</sup>.

Only misoprostol can also be used 25 to 50 mcg 4 hourly<sup>(6)</sup>. Dose can be adjusted according to gestational age (100 mcg- 6hrly before 26 wks, 25-50mcg 4hrly at 27 weeks and above)<sup>(5)</sup>.

Oxytocin drip infusion 5 to 10 units at 20 drops per minute could also be started if cervix was favorable, and also as supplement to prostaglandins.

Mechanical methods like foley catheter in situ were used in resistant cervix. Caesarean section was done in Previous LSCS (2 or more), transverse lie, placenta praevia, and in whom induction of labour has failed or obstructed labour.

Intrapartum management included routine antibiotic prophylaxis; Hydration, and close monitoring for adverse event and continuous moral support. Observations were documented on pre tested proforma. Data was entered and analyzed using Microsoft excel and Descriptive analysis was done.

### Observations:

**Table-1: Demographic And Obstetrics Profile Of Study Participants (n=144)**

Variable	No of cases (frequency)	Percentage
Registration of pregnancy		
Unregistered	114	79.2%
Registered	30	20.8%

Maternal age (in years)		
< 20	19	13.1%
21-25	62	43%
26-30	48	33.3%
31-35	11	7.6%
>35	4	2.7%
Parity		
Primi Gravida	39	27%
G2	47	32.6%
G3	28	19.4%
G4	19	13.1%
>G5	11	7.6%
Gestational age (in weeks)		
20-25	7	4.8%
26-31	51	35.4%
32-37	38	26.4%
>38	24	16.7%
Foetus weight		
0.5-1.0	32	22.2%
1.1-2.0	59	40.9%
2.1-3.0	42	29.2%
>3.0	11	7.6%

Table 1 showed that Unregistered cases were maximum that was 114 cases as compared to registered cases which were 30.<sup>(7)</sup> The sociodemographic distribution showed that patients in the age group of 21-25 years had highest number (43%) of cases<sup>(8)</sup>. Second pregnancy also recorded larger number (32.6%) of cases<sup>(10)</sup>. Majority (61.8%) of IUDs were preterm; the average foetal weight was also between 1 to 2 kg, 87 (60.4%) of the foetuses were male.

**Table 2: Etiological And Risk Factors Of IUD**

Factors	No. of cases	Percentage
Unknown	41	28.5%
PIH	24	16.7%
APH	27	18.7%
Anemia	5	3.5%
DM	6	4.2%
Maternal medical diseases	5	3.5%
IUGR	2	1.4%
Congenital Anomalies	14	9.7%
Oligohydramnios	7	4.8%
Cord accidents	4	2.8%
Trauma or labour Complications	9	6.2%

Table 2 depicts that still in large number (28%) of IUD, reason is unknown. Among the known factors, highest were due to APH (27 cases) and PIH (24 cases).

Majority (83.4%) of patients with IUD were delivered by vaginal route; among them 41 patient went into labour spontaneously while 79 needed induction of labour. Out of induced patient, 41 cases misoprost<sup>(4,5)</sup> was used; 14 cases prostaglandin gel was used; 21 required oxytocin and in 1 patient mechanical dilatation was done.

LSCS was done in 16.6% cases, out of which higher incidence (28.5%) was seen in gestational age above 37 weeks. In preterm IUD, in gestational age group of 20 to 28 weeks the incidence was 11.4% and 18.8% in gestational age 29 to 36.

The common indication for LSCS were maternal, majority APH seen in 8 (33.33%) cases, PIH and uterine rupture in 4 (16.6%) cases. Among the absolute indication of LSCS, previous history of 2 LSCS was in 6 (25%) cases.

The complications associated with IUD as shown in table 3.

**Table 3. Complications**

Complications	Frequency	Percentage
Psychological disturbance	33	22.9%
DIC	5	3.47%
Sepsis	7	4.86%
PPH	5	3.47%
Others	7	4.86%
Maternal Outcome		
Maternal Mortality	2	1.3%
Obstetric Hysterectomy	2	1.3%

## DISCUSSION

In our study of the 144 cases with IUD, majority (79.2%) were emergency cases. The patients who did not get antenatal care have a higher incidence of IUD. Majority were second gravida, 32.6% while 27% were primigravida.<sup>(14)</sup>

In this study, 22.2% patients had past history of abortion and 8.3% had past history of IUD; 3.47 % had previous history of both IUD and abortion; so total of 33.9% had bad obstetric history. In the etiological factors 28.3% had unexplained etiology, hypertensive disorders 16.7% and APH 18.7% were other major causes<sup>(12,13)</sup>. In a similar study conducted by Nayak et al the unknown factor had 25% incidence, PIH had 24.9% and APH had 10.7% incidence.

In the present study 83.4% of births took place vaginally, whereas study done by Hooja, Nupur et al 87.1% had vaginal deliveries<sup>(15)</sup>. The reasons for induction mainly were duration of IUD being unknown, psychological trauma and to prevent complications like DIC and septicemia. The indication for LSCS in present study were commonly APH 33.3% and Previous 2 LSCS about 25% and hypertensive disorders like 16.6%. In a similar study by Hooja Nupur<sup>(15)</sup>, 87.1% had normal deliveries, LSCS were more at 37 weeks and above (15.9%), and common causes for LSCS were APH and hypertensive disorders<sup>(15)</sup>.

In this study common complications were psychological upset 22.9%, followed by sepsis, DIC and PIH. Maternal mortality was of 1.3%. Both were unregistered and had no antenatal care. Both the patients came in first visit with Multi-organ failure. Underlying pathology was eclampsia, HELLP and abruption<sup>(16)</sup>.

## CONCLUSION

Regular antenatal care is mandatory for identifying high risk pregnancy and their timely management to reduce the incidence of IUD. Socio-cultural background, poverty, illiteracy, and lack of utilization of antenatal care are main reasons.

Sympathy, psychological support and reassurance can reduce effect of mental trauma after delivering IUD baby.

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