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Analysis of fetal death in utero

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Abstract

Background: In uterus fetal death is the fetal death occurring after 22 weeks of pregnancy or 500 g birth weight if the term is unknown or corrected. The global prevalence of fetal death in uterus from 28 Weeks or fetal weight greater than 1000 g is estimated to be around 2%, with the average around 5 per 1000 births in high-income countries. **Aim & Objective:** 1. Analysis of fetal death in utero.2. Study of risk factors of fetal death in utero. **Methods:** Cross sectional Study, Study setting: Department of OBGY Rohilkhand Medical College and Hospital Bareilly. Study duration: 10 November 2022 to 11 November 2023. Study population: All the cases with fetal uterine death as per WHO definition and those who give consent were included in the study. **Sample size:** 100. **Results:** Majority of cases from 20-35 years group 72%, 96% pregnant women gave birth naturally and 4% delivered by caesarean section. Majority of cases etiology was PIH 38% followed by unknown cause. **Conclusions:** In uterus fetal deaths remain common in our country. The main causes were hypertension disorders of pregnancy. There were also some unknown causes which could be related to economic or cultural reasons. For instance, autopsies of in uterus deaths and placental anatomopathology examination are not performed because of culture.

Keywords: Fetal death in uterus, Risk factors, Etiology

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Introduction

Intrauterine fetal death and still birth is a tragic event for the parents and a great cause of stress for the caregiver. Defined as the death of fetus more than 24 weeks of gestation and weighing more than 500 grams IUFD is major cause of pregnancy wastage. WHO definition of [1] still birth is 'fetal death in late pregnancy'.

The gestational age at which intrauterine fetal demise is considered a still birth varies from country to country. Some countries count demise at 16 weeks as IUFD while others consider fetal demise as late as 28 weeks as IUFD. the Perinatal Mortality Surveillance Report [CEMACE, 2011] defines stillbirth as 'a baby delivered without signs of life after 24 completed weeks of pregnancy'.

ACOG refers to IUFD as the demise occurring at or later than 20weeks. In a recent RCPI [Recent clinical practice investigation guideline], stillbirth is taken as a baby delivered without signs of life from 24 weeks gestation and IUFD is taken to [1] refer to death in utero after 24 weeks gestation.

IUFD and intrapartum fetal deaths together constitute a large portion of perinatal mortality. Ante-partum fetal death contributes to about two thirds of [2] perinatal mortality. Prevalence of perinatal deaths in a society is the direct indicator of [2] the quality of antenatal care in the country. the prevalence of IUFD has been reduced to a

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minimum unavoidable rate in developed countries; however it still remains very high in underdeveloped and developing countries.
Prevalence of IUFD and stillbirth is expressed as number of fetal deaths per 1000 live births. Range of incidence varies in different countries, ranging from five in 1000 births in high [3] [4] income countries and 36 in 1000 births in developing countries.
Rate of perinatal deaths in India is 32 per 1000 live births,[35 per 1000 live births in rural areas and 22 per 1000 live births in Urban areas], still birth rates in India is 9 per thousand births,[9:1000 births in rural India and 8 in 1000 births urban India], according to the Indian [5] census of 2006.

Aim and Objective
1. Analysis of fetal death in utero.
2. Study of risk factors of fetal death in utero

Material and Methods
Study design: Cross sectional Study, **Study setting:** Department of OBGY Rohilkhand Medical College and Hospital Bareilly. **Study duration:** 10 November 2022 to 11 November 2023. **Study population:** All the cases with fetal uterine death as per WHO definition and those who give consent were included in the study.
Sample size: 100
Inclusion criteria:
1. All spontaneous in uterus deaths as defined by the World Health Organization (WHO).

Exclusion criteria:
1. All pregnant women whose records indicated a pregnancy of less than 22 weeks of amenorrhea or whose fetus weighed less than 500 grams.
2. Records of intrapartum deaths, and deaths at birth.
3. Not willing to participate

Research methodology specified for data collection
Study subjects were enrolled after obtaining clearance from ethics committee. All the subjects were explained in detail about study procedure in language she understands.
Informed written consent was obtained from study participants. Predesigned and pretested study proforma was used as a tool for data collection.
Data was collected about sociodemographic characteristics, Parity, gestational age in weeks, ANC visits, Hypertensive disorders (PIH, preeclampsia or eclampsia), USG findings (Malpresentations, oligohydraminos), investigations like urine protein and CBC.
Data analysis
All the data collected was entered in excel spreadsheet and analyzed using SPSS version 21 software.Chi square test was used to study associations and etiology of fetal death in utero. $P<0.05$ was considered as significant.

Result And Observations
Table No.1: Distribution of cases according to age (N=100)

Age (Years)	Frequency	Percentage
<20	08	8%
20-35	72	72%
35 and Above	20	20%
Total	**100**	**100 (100%)**

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Above table shows that, majority of subjects were from age group 20-35 yrs contributing 72 (72%) followed by 35 and above yrs 20 (20%), > 20 yrs and 08 (8%)

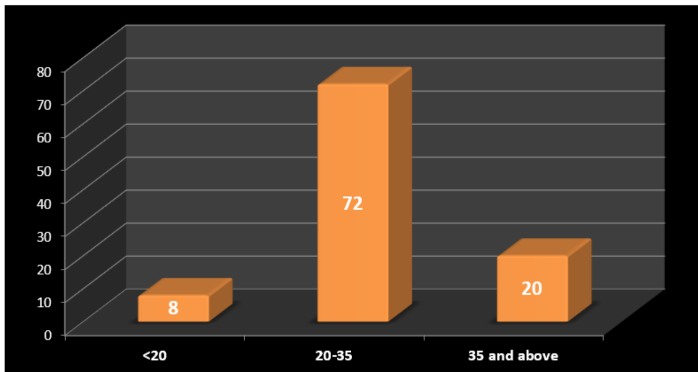

Figure 1: Distribution of cases according to age (N=100)

Table No.2: Distribution of study subjects as per ANC visits (N=100)

ANC visits*	**Frequency**	**Percentage**
<4 visits	60	60
≥4 visits	40	40
Total	**100**	**100**

ANC visits: Antenatal visits

<4 visits- Irregular or no visits, ≥4 visits: Regular visits

Above Figure shows that, most of study participants received inadequate ANC care as 60 (60%) cases with <4 visits whereas, 40 cases with ≥4 visits.

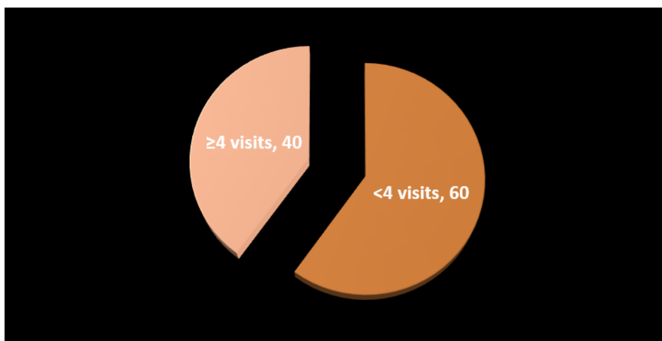

Figure 2: ANC visits

Table No.3: Distribution of study subjects according to parity (n=100)

Parity	**Frequency**	**percentage**
Primipara	45	45
Multipara	55	55
Total	**100**	**100**

Above table shows that, most of the study subjects were Multipara contributing 55 (55%) and 28 (28%) were Primipara 45 (45%).

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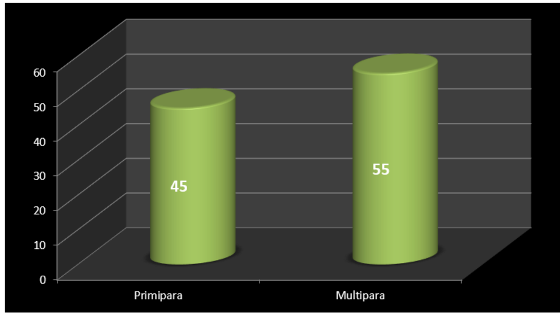

Figure 3: Distribution of study subjects according to parity (n=100)

Table No.4: Distribution of cases according to Etiology (N=100)

Etiology	**Frequency**	**Percentage**
Severe pre-eclampsia	38	38%
RPH	13	13%
PROM	04	04%
Fœto-maternal incompatibility	02	02%
Fetal malformations	02	02%
Trauma	04	04%
Eclampsia	04	04%
Diabetes	11	11%
heart Disease	04	04%
Anemia	10	10%
Placenta previa	02	02%
Unknown cause	06	06%
Total	**100**	**100 (100%)**

The most common etiology was severe pre-eclampsia 38 cases followed by RPH 13 cases,11 DM, 10 cases with anemia,6 cases with unknown cause, 4 cases with trauma,4 with eclampsia,4 with heart disease, 2 with placenta previa, Fetal malformations in 2, Fœto-maternal incompatibility in 2 cases.

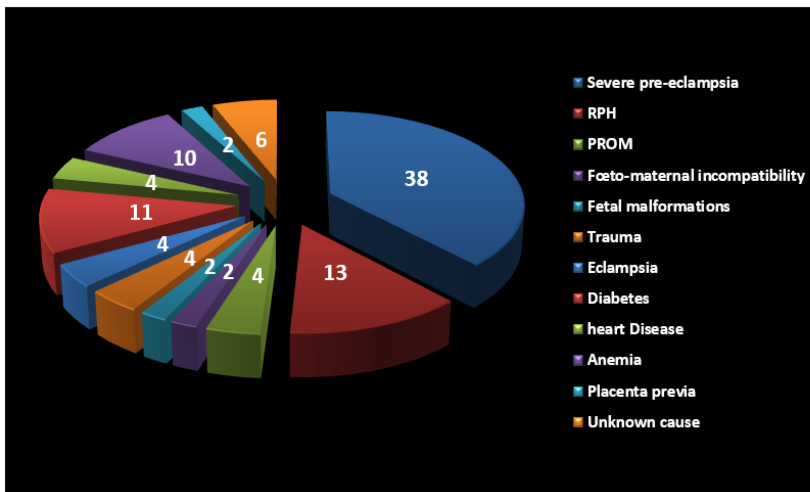

Figure 4: Distribution of cases according to Etiology (N=100)

Discussion

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This cross sectional study was conducted among 100 cases at Department of OBGY Rohilkhand Medical College And Hospital Bareilly, From 10 November 2022 to 11 November 2023. Study population: All the cases with fetal uterine death as per WHO definition and those who give consent were included in the study.

In current study majority of subjects were from age group 20-35 yrs contributing 72 (72%) followed by 35 and above yrs 20 (20%), > 20 yrs and 08 (8%). Similar result observed in the study by Kyembwa Mulyumba Michel [6] who found that the age group of (20 - 34 years) was 72.7% and TajiLeki S [7], 62.07% in Bunia in the DRC. In Mali Traore M. [8], who found 59% of fetal death in uterus cases in patients aged 20 to 34 years. Diallo in Guinea, found that pregnant women over 30 years of age were more represented [9].

In present study most of study participants received inadequate ANC care as 60 (60%) cases with <4 visits whereas, 40 cases with ≥4 visits. Similar result observed in the study by Al Kadri et al [10] he reported that the most of cases 63% received inadequate ANC care.

In present study most of the study subjects were Multipara contributing 55 (55%) and 28 (28%) were Primipara 45 (45%). Similar result observed in the study by Kyembwa Mulyumba Michel [6] who found that the majority cases with multipara 54%.

In current study most common etiology was severe pre-eclampsia 38 cases followed by RPH 13 cases,11 DM, 10 cases with anemia,6 cases with unknown cause, 4 cases with trauma,4 with eclampsia,4 with heart disease, 2 with placenta previa, Fetal malformations in 2, Fœto-maternal incompatibility in 2 cases. Similar result observed in the study by TajiLeki S [7] he reported that that most common etiology was pre-eclampsia 32%. Cabrol D [10] he reported that majority of cases with pre-eclampsia 30%.

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