## Original Article

# Epidemiology of intrauterine fetal death in Dhaka National Medical College Hospital

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### Abstract

*Intrauterine fetal death (IUFD) and still births is a tragic event for the parents and an important cause of perinatal mortality. This retrospective study study was conducted in the department of Obstetrics and Gynecology of Dhaka National Medical College Hospital from January 2015 to June 2016 with the intention to understand the incidence, socio-epidemiological and etiological factors of intrauterine fetal death (IUFD). A total of 1838 pregnancies were studied retrospectively during the study period & out of them 48 were IUFDs. Ante partum and intra partum events leading to fetal demise were recorded, socio-demographic and clinical characters were noted. there were 1838 deliveries . The incidence of prenatal loss was 26 per 1000 live births. Despite advances in diagnostic and therapeutic modalities the rate of IUD is unacceptably high. Socio-cultural background, lack of adequate antenatal care and inaccessible health care are some of the reasons that predispose women to IUFD. Majority of fetal wastage can be prevented with universal and improved antenatal care.*

***Keywords:*** *Intrauterine fetal death, still births, epidemiology.*

### Introduction

Death of a viable fetus is a distress to the family and the obstetrician. Despite advances in medical science, diagnostic and therapeutic modalities, pregnancy wastage still occurs, at an unacceptably high rate. IUFD is major cause of pregnancy wastage. IUFD and inrapartum fetal deaths together constitute a large portion of perinatal mortality. Prevalance of perinatal deaths in a society is the direct indicator of the quality of antenatal care in the country.[1] The antenatal care has changed in past 50 years.

The prevalence of IUFD has been reduced to a 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 5 in 1000 births in high income countries[2] and 36 in 1000 births in developing countries.[3] 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 can be identified.

### Methods

This retrospective study study was conducted in the department of Obstetrics and Gynecology of Dhaka National Medical College Hospital from January 2015 to June 2016 with the intention to understand the incidence, socio-epidemiological and etiological factors of intrauterine fetal death (IUFD). A total of 48 cases of IUFD and stillbirths among 1838 pregnancies were studied retrospectively during the study period.

Criteria for diagnosis were absent fetal heart sounds and an ultrasonographic confirmation. Ante partum and intra partum events leading to fetal demise were noted. Data collected to note the following parameters.

Socio-demographic factors including women's age, religion, parity, education level, socio-economic status, level of antenatal care, immunization, and Iron and calcium intake were noted. Clinical parameters i.e. gestational age at the time of diagnosis, obstetric history, past and present medical history, history of pregnancy related and aggravated conditions were also noted. Investigations i.e. CBC, blood grouping and Rh typing, urine examination, HbsAg, VDRL, blood sugar, Thyroid profile, LFT, KFT were done. Special investigations were done relevant to the case.

Written informed consent was obtained from all patients. Study protocol was approved by institutional review board.

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## Results

The present study consisted of 48 cases of intrauterine fetal death and stillbirths, which occurred during the study period. A total of 1838 deliveries were conducted during this study period. The incidence of stillbirths in our study was 26 per 1000 live births.

Among the intrauterine fetal deaths, 18 were fresh and 30 were macerated stillbirths. There were 28 male babies and 20 female babies. Majority of women were primigravida (44.6%). Most cases of IUFD were diagnosed between 30 to 35 weeks of pregnancy.

Hypertensive disorder was found to be complicating 28.7% pregnancies, and 4.2% women were diabetic. There was one case of road traffic accident. Maternal infections were found to be complicating eight pregnancies out of which there were two cases of jaundice (infective hepatitis), five cases of clinically proven malaria and one case of pneumonia. All the cases of malaria were clustered in the month of August.

There were 19.5% women where no causative factor was found for intrauterine fetal demise. Further investigation –including an autopsy- was ordered but the patients refused.

A total of 17.2% cases presented with ante partum hemorrhage out of which 4.1% were placenta previa, and 11.7% placental abruption. Severe IUGR was found to be responsible for the death of 8.5% babies, 11.5% fetuses had congenital anomalies. (Table-I)

**Table-I :** Risk factors for IUFD.

| Risk factors | Number(%) |
| --- | --- |
| Maternal risk factors | |
| PIH and complications | 15(31.25) |
| Medical disorders | 6(12.5) |
| Labor complications | 2(4.1) |
| Infections | 2(4.1) |
| Severe Anaemia | 3(6.2) |
| Fetal risk factors | |
| Rh immunizations | 1(2.0) |
| Non Immune hydrops | 1(2.0) |
| PROM with chorioamnionitis | 3(6.2) |
| Multiple pregnancy | 1(2.0) |
| Congenital anomalies | 4(8.3) |
| Placental risk factors | |
| Accidental haemorrhage | 1(2.0) |
| IUGR | 4(8.3) |
| Cord accidents | 1(2.0) |
| Post datism | 1(2.0) |
| Placenta previa | 2(4.1) |

## Discussion

This retrospective study consists of 48 IUD and still births amongst 1838 total births at Dhaka National Medical College Hospital, Dhaka from january 2015 to june 2016. So the incidence of IUD and still births was 26/1000 births. The incidence of stillbirth reported from western countries ranges from 4.7% to 12.0%.[4-10] This is lower than that observed in our study. The reason could be a high number of unsupervised deliveries due to various reason like literacy, low socioeconomic status and the paucity of monitoring facilities in rural areas.

A study carried out in1993 at Dhaka Medical College Hospital, which is the largest referral hospital in Dhaka city, reviewed 20,119 deliveries; PMR was 143 per 1000 total births.[11]

In 2001, Azad et al[12] analysed perinatal deaths using Wigglesworth classification in 5 centers, viz. Dhaka Medical College Hospital (DMCH), Bangabandhu Sheikh Mujib Medical University (BSMMU), BIRDEM Hospital, 200 bedded specialised hospital at Narayangonj, and Bhaluka Upazilla Health Complex. A total of 8058 births were recorded at the 5 centers during a period of 11 months, from mid-January to mid- December 2001.

This study used the definition of perinatal deaths as stillbirths occurring at 28 weeks of gestational age or more, (instead of 22 weeks as suggested by WHO) and early neonatal deaths before 7 days of life. There were 1069 perinatal deaths; stillbirths were more frequent (53.5%) than early neonatal deaths (46.5%). Some problems were encountered by Azad et al in carrying out their study[12]. At DMCH and Narayangonj, a large number of cases (about 20% and 60% respectively) were not recorded. At DMCH, a significant number of stillbirths were not classified. So, proper orientation of the staffs are necessary for good record keeping. In a community study done at Matlab [13,14] in 1979-86, perinatal mortality rate was quoted as 75 per 1000 total births with stillbirths[13] and the present study has the limitation of being hospital based, it emphasizes that improving the quality of antenatal can reduce perinatal mortality.

This study shows that the incidence of stillbirths in our population is gradually decreasing though it is still higher than those reported from developed countries. This is associated with rural area, poor socioeconomic status, multiparity, previous history of pregnancy loss, unsupervised deliveries, gestational hypertension, and CMFs. Proper screening and antenatal supervision can play an important role in decreasing the rate of stillbirtn of fetal death.

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