WHEN FETUS COMMITES SUICIDE… A STUDY OF 110 CASES AT C U SHAH MEDICAL COLLEGE, SURENDRANAGAR GUJARAT

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ABSTRACT

The death of a formed fetus is one of the most emotionally devastating events for parents and clinicians. It is psychological and emotional shock to parents when they know that their baby has suddenly died in utero.

Aims and Objectives: *To know the causes of IUD and determine the risk factors and minimize the complications of IUD and maternal morbidity and mortality.*

Method: *A prospective study was done to study 110 cases of IUD. On admission, patient's detailed history was taken, examination, investigations and ultrasonography was done and the case was managed accordingly.*

Results: *A total 110 cases of IUD were studied over one year in our institute. Out of them 70 had not taken any antenatal visits, 96 patients were aged below 30 years, 11 patients were aged between 31 to 35 years and 3 patients above 35 years. 56 were primigravida, 40 were second gravida and 14 were multigravida. Of 28 cases causes were unknown, 18 cases had abruptions, 8 cases had PIH, 15 cases had preeclampsia, 11 cases had eclampsia, 12 had cord accidents, 3 had oligohydraminos, 2 had jaundice, 1 had rupture uterus and 8 patients had congenital anomaly. 28 patients delivered spontaneously, 75 delivered by induction of labor and 7 patients required caesarean section. 5 patients developed PPH and 7 patients developed DIC.*

INTRODUCTION

The loss of a fetus at any stage is a fetal demise. According to the 2003 revision of the Procedures for Coding Cause of Fetal Death nder ICD-10, the National Center for Health Statistics defines fetal death as "death prior to the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy and which is not an induced termination of pregnancy. With improved care for conditions such as Rh D allo immunization, diabetes and preeclampsia, the rate of fetal death has been decreased substantially in the mid-twentieth century. However, the past several decades have seen much greater reduction in neonatal death rates than in fetal death rates. As such, fetal death remains a significant and understudied problem that now accounts for almost 50% of all perinatal deaths.

The availability of prostaglandins has greatly facilitated delivery options for patients with fetal death. Risk factors for fetal death include African American race, advanced maternal age, obesity, smoking, prior fetal death, maternal diseases and fetal growth impairment. There are numerous causes of fetal death, including genetic conditions, infections, placental abnormalities and feto–maternal hemorrhage. Many cases of fetal death do not undergo adequate evaluation for possible causes. Antenatal surveillance and emotional support are the mainstays of subsequent pregnancy management. Outcomes may be improved in women with diabetes, hypertension, Rh D allo immunization and antiphospholipid syndrome. However, there is considerable room for further reduction in the fetal death rate. *(Obstet Gynecol 2007;109:153–67)*

MATERIAL AND METHODS

Total 110 cases of IUD were studied in Obstetrics and Gynaecology Department of C U Shah Medical College, Surendranagar during period of February 2014 to March 2015. All these patients in this study were admitted in our unit through outdoor patient department or reffered from private clinics. Some of the patients came as diagnosed cases with USG reports while rest of them were diagnosed in our department and confirmed with USG finding in our department. Death of fetus during labor was excluded from study. All these patients were admitted in antenatal ward and detailed questionaire including following parameters was filled to evaluate the whole case. Age, socio-economic condition, gravidity, parity, previous mode of delivery, history of previous abortions, stillbirth, premature labor, fetal anomalies, previous history of hypertension during pregnancy, complication during previous pregnancy, history of Rh incompatibility, history of injection at home, manipulation by Dai, history of leaking, bleeding per vagina, swelling over leg or vulva, blurring of vision, headache, convulsion, epigastric pain. At the time of admission, detailed examination was performed. Detailed ultrasonography was done to confirm the diagnosis and to find some etiology like abruption, oligohydraminos, cord accidents, fetal malformations and maturity.

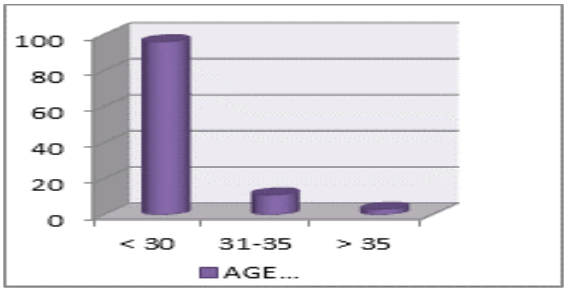
All the detailed investigations like complete blood count with indices, blood group with Rh factor,

coagulation profile with BT, CT, PT, APTT, d-dimer, FDP, blood sugar, bilirubin and liver enzyme levels, creatinine and blood urea level, serum protein and urine routine micro were done and case was managed accordingly.

RESULTS

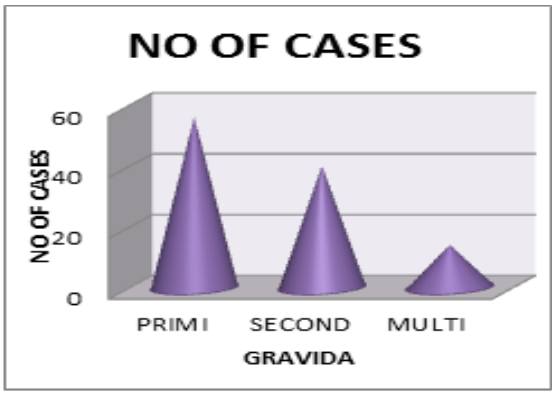
During this period, number of IUD was 110. Out of them 96 (87.3%) cases were below 30 years of age, 11(10%) were between 31 to 35 years of age and 3(2.7%) cases were above the 35 years of age.

Age(Years)	No. of Cases	% of Cases
<30	96	87.3
31-35	11	10
>35	3	2.7



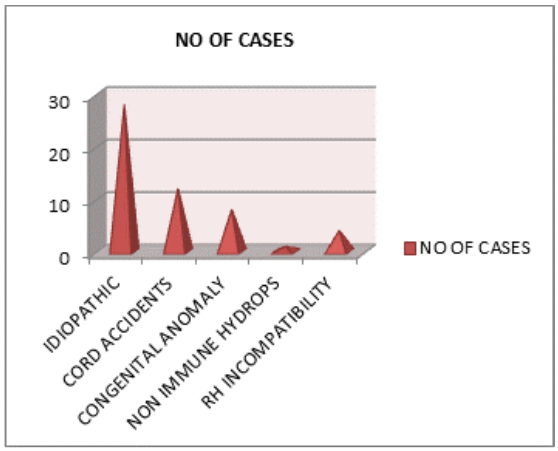
56(51%) cases were primigravida, 40(36.3%) cases were second gravid while 14 (12.7%) cases were multigravida. 110 women delivered total 112 babies as 2 women had twins delivery.

GRAVIDA	NO OF CASES	% OF CASES
PRIMI	56	51
SECOND	40	36.3
MULTI	14	12.7



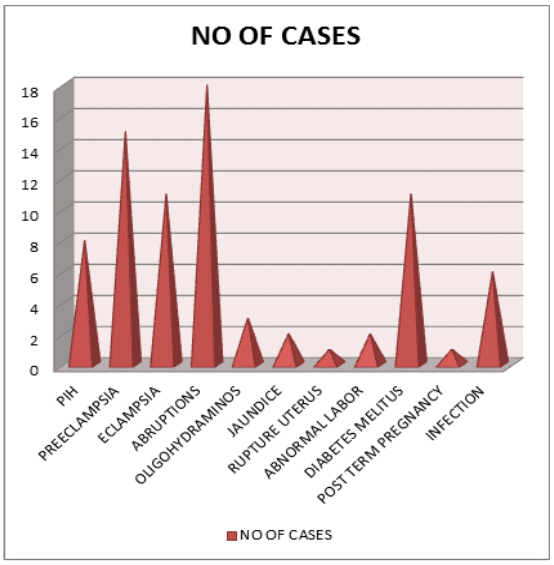
Fetal risk factors were identified in following cases: 8(7.2%) cases had congenital anomalies, 4(3.6%) had Rh incompatability, 1(0.9%) had non immune hydrops, 12(11%) had cord accidents.

Causes	No. of Cases	% of Cases
Idiopathic	28	25.5
Cord accidents	12	11
Congenital Anomaly	8	7.2
Non immune hydrops	1	0.9
Rh incompatibility	4	3.6



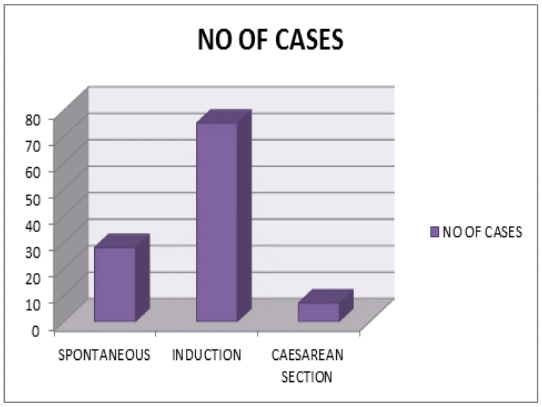
Maternal risk factors were identified as 8(7.2%) cases had PIH, 15(13.6%) had preeclampsia, 11(10%) cases had eclampsia. Out of all, 18(16.3%) had abruptions, 11(10%) had diabetes, 3(2.7%) cases had oligohydraminos, 2(1.8%) had jaundice & one of them was diagnosed as hepatitis E.

Causes	No of cases	% of cases
PIH	8	7.2
Preeclampsia	15	13.6
Eclampsia	11	10
Abruptions	18	16.3
Oligohydraminos	3	2.7
Jaundice	2	1.8
Rupture uterus	1	0.9
Abnormal labor	2	1.8
Diabetes melitus	11	10
Post term pregnancy	1	0.9
Infection	6	5.5



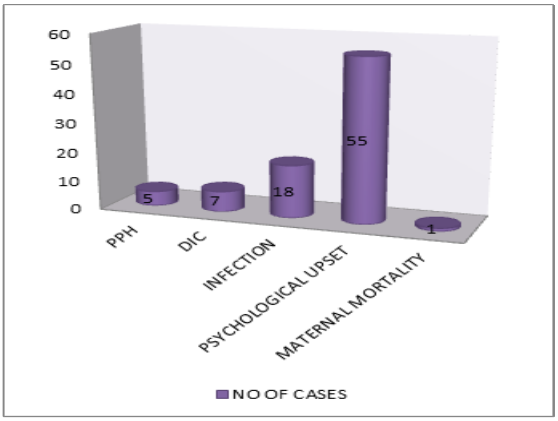
Out of them 28(25.5%) cases delivered spontaneously, 75(68.1%) cases with induction and 7(6.36%) cases by caesarean section.

Mode of delivery	No of cases	% of cases
Spontaneous	28	25.5
Induction	75	68.1
Caesarean section	7	6.36



Total 5(4.5%) patients complicated as postpartum haemorrhage, 7(6.3%) cases had disseminated intravascular coagulation, 18(16.3%) had infection, 55(50%) had psychological upset and 1(0.9%) maternal mortality.

Complication	No of cases	% of cases
Pph	5	4.5
Dic	7	6.3
Infection	18	16.3
Psychological upset	55	50
Maternal mortality	1	0.9



DISCUSSION

Total numbers of intrauterine death in this study were 112 as two women delivered twins. In this study, significant number (87.3%) of intrauterine death occurred in patients whose age below 30 years. While 10% of cases, were in age of 31 to 35 years.

In this study, major causes of IUD were hypertension disorder of pregnancy, placental abruptions and most of them were idiopathic. In a large metaanalysis for the causes of IUD, Ruth Frets found atleast fifteen causes accounting for IUD. According to her observation unexplained and severe IUGR are two main categories for fetal losses [1]. Al Kadri et al found that women that did not receive ANC are at 70% risk of IUD. It is 25 fold higher in women with placental abruption, ten fold higher in IUGR, and three fold higher with PIH [2]. According to Kotweg et al the single most important cause of IUD was growth retardation, emphasizing the importance of placental role in optimal fetal growth. [3] Despite improved care, women with diabetes mellitus (type 1 and 2) have a 2.5-fold increase in the risk for fetal death. [4] Conversely, true gestational diabetes (type 2 diabetes may be first recognized during pregnancy) is not associated with an increased risk for fetal death. In a review of 310 autopsies following IUFD, Horn et al.[5] showed placental or umbilical cord pathology that could contribute to fetal death in 61.6% of the cases and to fetal abnormalities in 23% of the cases. In the absence of autopsy, fetal magnetic resonance imaging or radiographic studies (a "fetogram") has been advocated to enhance the ability to detect congenital anomalies.

CONCLUSION

Nothing is as sad and depressing as intrauterine fetal death for both parents and obstetricians. Congenital malformation and aneuploidies are unavoidable but IUD due to these causes can be prevented by routine screening and managing accordingly. Hypertension, diabetes, haemorrhages, maternal infections are the common

factors which can be modified or prevented. Recent advance in Colour Doppler can identify fetus in early stage of hypoxia and it can be delivered alive. With use of many other methods like Non Stress Test, Bio Physical Profile, modified Bio Physical Profile in high risk pregnancy, fetus can be identified at earliest point of hypoxia. Despite advance in diagnostic and therapeutic modalities, a large number of fetal deaths remain unexplained even with proper antenatal care. Socio-cultural background, poverty, illiteracy, unawareness and inaccessible health care are some of the reasons that predispose the woman to IUD. Majority of these can be prevented with health education and proper and universal antenatal care.

If a specific diagnosis is found for the previous loss, preconception or early pregnancy, perinatology or genetic counsellor consultation is suggested to ensure management of the underlying condition. Consideration of maternal serum screening for aneuploidy may be beneficial, because low Pregnancy Associated Plasma Protein A (PAPP-A) in first-trimester screening and unexplained elevated Maternal Serum Alpha-Fetal Protein (MSAFP) in the second trimester are associated with an increased risk for adverse perinatal outcome and may prompt more intensive ultrasound or fetal testing surveillance.[6,7] Assessment for fetal growth via ultrasound at 28 to 32 weeks gestation is recommended. Weeks reviewed the data on fetal monitoring in subsequent pregnancies following a fetal death and recommended antenatal testing with weekly Bio Physical Profile (BPP) or modified BPP starting at 32 to 36 weeks.[8] Gold et al. reviewed the literature of patient preference and satisfaction in care following a fetal death. In this review of 60 studies and 6200 patients, Gold et al.[9] Described several guidelines based on patient preferences for care following a fetal death.

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