

Perinatal Outcome in Pregnancy Complicated by Obstetric Cholestasis

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ABSTRACT

Aim: To determine the perinatal outcome in pregnancy complicated by obstetric cholestasis.

Study type, Setting, duration: This descriptive study was conducted in Gynae unit 1 of Shalamar Medical and Dental College, Lahore from 1 October 2014 to 31 October 2015.

Methods: All the pregnant ladies who were diagnosed as having obstetric cholestasis and delivered during the study period were included in the study. Variables studied included age, parity, gestational age of appearance of symptoms, sign /symptoms, liver function tests, mode of delivery and fetal outcome. Information was collected on a predesigned questionnaire. SPSS version 15 was used for analysis.

Results: Total 1250 ladies were delivered in Gynae unit 1 during the study period. Out of these 35 cases [2.8%] were diagnosed to have obstetric cholestasis. The mean age of subjects was 26.4 years. The data of parity showed 15(42.8%) were primigravida and 20(57.1%) were multi gravida. The most common presenting symptom was pruritis (91.4%). Gestational age at which symptoms appeared first was 34-36 weeks in 22 patients(65.8%), 32-34 weeks in 5 cases(14.4%), before 32 weeks in 4 cases (11.4%) and 37 week in 3 cases(8.6%). Out of 35 cases 15 patients (42.8%) had normal vaginal delivery and 20 patients (57.2%) were delivered by cesarean section. Perinatal outcome revealed 10 babies (28.5%) were meconium stained, 6 babies(17.1%) showed abnormal CTG pattern. Intrauterine growth retardation was seen in 6(17.1%) and prematurity in 9 cases(25.8%). Intrauterine death occurred in 1 patient(2.8%).

Conclusion: Cholestasis of pregnancy has adverse effects on perinatal outcome, hence early diagnoses, vigilant follow up and timely delivery is essential.

Keywords: Pregnancy, cholestasis, pruritis, liver function tests.

INTRODUCTION

Intrahepatic cholestasis of pregnancy also known as obstetric cholestasis is characterized by pruritis in second or third trimester of pregnancy, elevated liver enzymes and bile acids and spontaneous relief of signs and symptoms two or three weeks after delivery^{1,2}. Intrahepatic cholestasis of pregnancy has been consistently associated with a higher incidence of adverse pregnancy outcome including spontaneous or iatrogenic preterm delivery, meconium staining of amniotic fluid, fetal distress and still birth³. The risks of complications for the fetus are associated with the elevated maternal serum bile acid levels and women with more severe cholestasis are at greater risk⁴.

Obstetric cholestasis is associated with significant maternal morbidity due to persistent itching and sleep deprivation⁵.

The aim of our study is to determine the perinatal outcome in pregnancies complicated by cholestasis.

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METHOD

This descriptive study was carried out in Gynae unit 1 of Shalamar Medical and Dental College, Lahore from 1 October 2014 to 31 October 2015. The ethical clearance was taken from the Ethical Review Committee of Shalamar Medical and Dental College Lahore. All the pregnant ladies who were presented with pruritis and deranged LFTs were included in the study. Pregnant ladies with deranged LFTs due to other causes like pre-eclampsia, acute hepatitis were excluded from the study.

Obstetric cholestasis was defined as generalized pruritis and elevated liver enzymes. Women included in the study were followed till the time of delivery. LFTs were done at weekly interval and fetal wellbeing was assessed by serial ultrasounds and maternal perception of fetal movements and fetal heart rate determination by cardiotocography. If LFTs and fetal ultrasounds are not deteriorating pregnancy is prolonged till term that is 37 weeks of gestation. Variables like age, parity, sign and symptoms, gestational age of presentation, LFTs reports, gestational age at the time of delivery, mode of delivery and fetal outcome were recorded on

the predesigned proforma. Data was analyzed by SPSS version 15.

RESULTS

Total 1250 females were delivered in Gynae unit 1 of Shalamar Hospital Lahore during the study period. Out of these 1250 ladies, 35(2.8%) were diagnosed to have Obstetric cholestasis. The mean age of subjects was 26.4 years (18-38 years). Out of these 35 ladies 15(42.8%) were primigravida and 20(57.1%) were multigravida. Pruritis was the main presenting symptom (91.4%). Gestational age of appearance of first symptom was 34-36 weeks in 22 subjects (65.8%), 32-34 weeks in 5 cases (14.4%), before 32 weeks in 4 cases (11.4%) and 37 weeks in 3 cases (8.6%). Out of these 35 cases 15 patients (42.8%) had normal vaginal delivery and 20(57.2%) were delivered by cesarean section. Gestational age at the time of delivery was 32 weeks in 2 cases (5.7%), 34 weeks in 1 case (2.8%), 35 weeks in 2 cases (5.7%), 36 weeks 4 cases (11.4%), 37 weeks in 22 cases (62.8%) and 38 weeks in 4 cases (11.4%). Perinatal data showed 10 babies (28.5%) were meconium stained, 6 babies [17.1%] were showed abnormal CTG pattern, IUGR seen in 6(17.1%) and pre term delivery occurred in 9(25.8%) intrauterine death occurred in 1 case (2.8%)

DISCUSSION

The study showed 2.8% of pregnancies were affected by intrahepatic cholestasis. A study done on 101 women diagnosed with intrahepatic cholestasis in San Francisco General Hospital from January 2005 to March 2009 showed the prevalence of intrahepatic cholestasis was 1.9%⁶. Different studies showed that incidence of intrahepatic cholestasis varied from 0.02% to 2%. The significant variation in prevalence is with geographical location and ethnic background. It may be upto 15% in Chile and Bolivia and less than 1% in Europe⁷.

In our study we found the main presenting symptom was generalized pruritus. Different studies had similar findings that pruritus was the primary clinical symptom⁸. Pruritis may be mild and tolerable in some cases but it might be severe and debilitating for others.

The results of our study showed that gestational age at the appearance of symptom was 32-34 weeks. A retrospective case control study of 45 women with obstetric cholestasis in India done in November 2003 to November 2006 showed pruritus appeared after 28 weeks was the main symptom⁹.

In our study we made diagnosis of obstetric cholestasis by pruritus and deranged LFTs. The study

performed in Turku University Central hospital between 2000 to 2005 diagnosis was also made by maternal itching, raised bile acids in maternal serum and raised aminotransferase¹⁰.

The present study showed Intrahepatic cholestasis was associated with adverse fetal outcome including prematurity, meconium staining of amniotic fluid, fetal distress and intrauterine fetal demise. A retrospective study conducted in three large hospitals of Netherland from January 2005 to August 2012 on 215 women with obstetric cholestasis. The main outcome measures were preterm birth, meconium stained amniotic fluid asphyxia and perinatal death, the results showed these complications occur more in pregnancies with cholestasis¹¹.

Another study done in tertiary private hospital in I from November 2003 to November 2006 also revealed higher incidence of meconium staining, pre term delivery⁹. The risks of complication for fetus were associated with maternal serum bile acids and women with more severe cholestasis¹². In our study we also noted that women with worsening LFTs and severe cholestasis had higher incidence of developing complications of fetus.

In our study we found most of the actively managed women were delivered around 37 weeks of gestation. Roncaglia et al concluded that elective delivery at 37 weeks in addition to fetal monitoring can significantly reduce the still birth rate¹³. Pwljic et al also studied the risk of fetal death by each additional week of expectant management in pregnancies complicated by intrahepatic cholestasis¹⁴.

More comprehensive and large studies are required to determine disease severity and its effects on fetus along with measures to handle the problem.

CONCLUSION

Cholestasis of pregnancy has adverse effects on perinatal outcome, hence early diagnosis, vigilant follow up and timely delivery is essential.

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