International Journal of Medical and Health Research
ISSN: 2454-9142
www.medicalsciencejournal.com
Volume 4; Issue 11; November 2018; Page No. 95-97

Obstetric cholestasis: Fetomaternal outcome

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Abstract
Background: Obstetric cholestasis is one of the most common causes of liver disease in pregnancy. Present study was carried out to study feto-maternal outcome in OC in a tertiary care hospital.
Methods: This was a prospective study performed in SMGS hospital from September 2017 to May 2018 in 100 pregnant ladies suffering from pruritus and detected as having Obstetric Cholestasis. They were followed up and maternal as well as fetal-neonatal outcome recorded.
Results: Mean gestational age of onset was 32.25 weeks. Maternal complication in form of sleep disturbance (58%), deranged coagulations profile (15%), PPH (8%) and more number of operative deliveries (65%) were found. Fetal complication were meconium stained liquor (21%), NICU admissions (15%), IUFD (2%), LBW (10%).
Conclusions: Early diagnosis and close monitoring may improve maternal and perinatal outcome.

Keywords: obstetric cholestasis, pruritis, outcome

1. Introduction
Obstetric cholestasis (also referred to as intrahepatic cholestasis of pregnancy) is a liver disease unique to pregnancy characterized by pruritus in the absence of a skin rash with abnormal liver function tests; which occurs in the second or third trimesters and disappears spontaneously after delivery. Obstetric cholestasis is a common liver disease during pregnancy [1] and incidence rates varies between 0.4 and 15% in different countries and populations [2, 3]. Obstetric cholestasis can be complicated by fetal distress spontaneous preterm labor and sudden intrauterine death [4, 5, 6, 7]. It is also associated with significant maternal morbidity due to persistent itching and sleep deprivation [8]. In our study we determine the outcome of OC in both mother and the fetus.

Material and Methods
This was a prospective study performed in SMGS hospital from September 2017 to may 2018. The diagnosis of obstetric cholestasis was made by excluding other liver and dermatological disorders. Diagnosis of OC was made clinically with symptom of pruritus, worsening at night without a skin rash, associated with biochemical evidence of cholestasis in form of elevated serum transaminases (ALT and AST) with or without elevated serum bilirubin 100 cases were included in the study for monitoring clinical nature of the disease, relevant biochemical alterations and outcome of pregnancy. Physician consultation was done for every patients. Other relevant investigations were done to exclude other conditions of altered LFT like Hepatitis serology, hepato-billiary ultrasonography, liver autoimmune screen, etc.
LFT was repeated every 2-4 weeks interval as required. Coagulation profiles were also detected. In present study serum levels that are more than upper limit of pregnancy specific reference ranges are considering as positive for OC. However, due to some limitation, measurement of serum bile acid could not be done. All patients recived in antenatal period in the study were given ursodeoxycholic acid 300-600 mg/day in divided doses for the rest of the antenatal period.
Maternal outcome was studied in reference to insomnia due to severe pruritus, and deranged coagulation profile (increase PT), mode of delivery, preterm labour, preterm pre-labour rupture of membrane, postpartum hemorrhage.
Fetal outcome was studied in reference to prematurity, fetal distress or hypoxia, meconium stained liquor, low birth weight (less than 2.5 kg) or Intra Uterine Growth Restriction, NICU admission rate and perinatal death (IUFD/Still born).

Results
A total number of 100 patients were included in the study. Mean age of the patients was 25.44 with more prim gravida (59%). Cardinal symptoms was pruritus in 89% of the patients, patients has relief of their symptoms with urodeoxycholicacid .Mean gestational age of onset 32.25 weeks (table 1). Table 2 shows biochemical characteristics of patients. Using pregnancy specific ranges for the LFTs, SGOT was raised in 58% of the patients, SGPT in 60% of the patients. ALP in 80% of the patients. Serum bilirubin was raised in 15% of the patients .Table 3 and 4 shows maternal and perinatal outcome. Meconium stained liquor in 21% patients of which 12% has thick meconium and need NICU admission. Most of patients with thick meconium has severly deranged LFT's.14 patients were delivered before 37 weeks ,of which 3 patients has preterm labour and 5 has pprom, 6 patient undergo LSCS due to abnormal CTG. In 80% of the patients, labour was induced 20% has spontaneous labour. Most of patients are induced at 37-38 weeks. Operative delivery was significantly high(64%), LSCS was done in 58% of the patients and instrumental delivery in 7%. 2 Patients had

IUFD and NICU admissions in 15.Patients with IUFD were unbooked cases of our hospital received in labour room with severely deranged LFT, s. NICU admission were more in meconium stained liquor with LFT,s in higher range.

Table 1: Patients charachertics

	Min-max	Mean ±SD
Age	18-40	25.44±3.35
Gravidity	1-6	1.23±2.25
Onset time of pruritus	26-37	32.25±3.5

Table 2: Biochemical Characteristics of patients

	Min- max	Mean ± SD
SGOT IU/L	40-800	155 ± 100.5
SGPT IU/L	40-700	176±
Serum bilirubin mg/dl	1.1-5.2	1.5±1.3

Table 3: Maternal outcome in cholestasis of pregnancy

Maternal outcome	Number	Percentage
Sleep disturbance	58	58
Deranged coagulation profile	15	15
PPH	8	8
PROM	5	5

Table 4: Perinatal outcome in cholestasis of pregnancy

Preterm labour	3	3
Pprom	5	5
Meconium stained liquor	21	21
Featal distress	15	15
LSCS	58	58
Instrumental delivery	7	7
Apgar<7 at 5 min	15	15
Neonatal nursery admission	15	15
IUFD	2	2
Low Birth Weight	10	10

Discussion

The Aim of this study was to describe the fetomaternal outcome of OC. The mean age was 26.3 years, this is similar to the results shown by Rasheed S *et al.* (28 years+ 5.19) and Sosa SY *et al.* (29.2±6.8 yrs), [9, 10] although some studies reported relatively higher mean age [11]. In our study, 59% of the patients are prim gravidae. padmaja *et al.* Found in his study that ICP was present mostly in prim gravidae (71.8%) whereas Singh *et al.* also found that 52% of patients were prim gravidae in their study [12, 13]. ICP has been associated with increased risk of preterm delivery (up to 19–60 %), meconium staining of amniotic fluid (up to 27 % cases), fetal bradycardia (up to 14 %), fetal distress (22–41 %), and fetal loss (0.4–4.1 %) [14, 15] particularly when serum bile acid level goes beyond 40 mmol/l [16]. In our study PPROM in 5% of the patients and preterm labour in 3% of the patients which were comparatively less as compare to previous studies but meconium stained liquor (21%) and nicu admissions (21%) were higher. The rate of induction of labour was 80% higher in our study Aloknanda and Rashne had reported that 68.75% had spontaneous onset of labor, whereas as Heinonen and Saarikoski, found 12.5% that had undergone labor induction for cholestasis of pregnancy [17, 18].

Operative delivery rate 65% was higher in our study, LSCS in 58% and7% instrumental delivery. Kenyon AP *et al.* found caesarean section rate 36.0%. Rasheed S *et al.* reported spontaneous delivery rate of 80% with emergency LSCS rate of 16.7% and elective LSCS rate of 3.3% [9, 19].

Dang A *et al.* (29.78%) reported significant increased incidence of PPH, as a result of malabsorption of vitamin K leading to coagulation problem [20]. Kenyon AP *et al.* found a high incidence of PPH in OC patients who did not receive vitamin K compared to those who did 45% vs 12%(19)Present study shows 8% incidence of PPH. Here 15 patients had deranged coagulation profile and among them 4 (4%) patients had PPH.

Conclusion

We found in our study rates of operative deliveries are increased, pruritis decreases with UDCA .Meconium stained liquor and NICU admissions are also high. Early diagnosis and close monitoring may improve maternal andperinatal outcome

References

1. Joshi D, James A, Quaglia A, Westbrook RH, Heneghan MA. Liver disease in pregnancy. Lancet. 2010; 375:594-605.
2. Lammert F, Marschall HU, Glantz A, Matern S. Intrahepatic cholestasis of pregnancy: molecular pathogenesis, diagnosis and management. J Hepatol. 2000; 33:1012-21.
3. Geenes V, Williamson C. Intrahepatic cholestasis of pregnancy. World J Gastroenterol. 2009; 15:2049-66.
4. Reid R, Ivey KJ, Rencoret RH, Storey B. Fetal complications of obstetric cholestasis. BMJ. 1976; 1(6014):870-872.
5. Reyes H. The enigma of intrahepatic cholestasis of pregnancy: lessons from Chile. Hepatology. 1982; 2(1):87-96.
6. Fisk NM, Storey GN. Fetal outcome in obstetric cholestasis. Br J Obstet Gynaecol. 1988; 95(11):1137-1143.
7. Rioseco AJ, Ivankovic MB, Manzur A, *et al.* Intrahepatic cholestasis of pregnancy: a retrospective case – control study of perinatal outcome. Am J Obstet Gynecol 1994; 170(3):890-895.
8. Royal College of Obstetricians and Gynecologists. Obstetric Cholestasis. RCOG Guideline, 2006.
9. Rasheed S, Afghan S, Mazhar SB. Fetomaternal outcome in patients with obstetric cholestasis. Ann Pak Inst Med Sci. 2009; 5(4):211-5.
10. Sosa SY, Valenzuela A, Pacheco J, Damián R. Intrahepatic Cholestasis of Pregnancy: Evaluation of Risk Factors and Predictive Factors. Internet J Gynecol Obstet. 2010; 12(2):465-74.
11. Pata O, Vardareli E, Ozcan A, *et al.* Intrahepatic cholestasis of pregnancy: correlation of preterm delivery with bile acids. Turk J Gastroenterol. 2011; 22(6):602-605.

12. Padmaja M, Gupta JK, Bhaskar P. A study of obstetric cholestasis. J Obstet Gynaecol India. 2010; 60(3):225-31.
13. Singh G, Sindu MK. Cholestasis of pregnancy: A prospective study. Med J Armed Forces India. 2008; 64:343-5.
14. Heinonen S, Kirkinen P. Pregnancy outcome with intrahepatic cholestasis. Obstet Gynaecol. 1999; 94:189-193.
15. Catherine W, Laura H, Dimtrios G, *et al.* Clinical outcome in a series of cases of obstetrics cholestasis identified via a patient support group. BJOG. 2004; 111:676-681. doi: 10.1111/j.1471-0528.2004.00167
16. Glantz A, Marschall HU, Mattsson LA. Intrahepatic cholestasis of pregnancy: relationship between bile acid levels and fetal complication rates. Hepatology. 2004; 40:467-474. doi: 10.1002/hep. 20336. [PubMed][CrossRef]
17. Aloknanda R, Rashne T. Nature and outcome of pregnancy in obstetric cholestasis. Obstet Gynaecol India. 2005; 55(3):247-50.
18. Heinonen S, Saarikoski S. Reproductive risk factors of fetal asphyxia at delivery: A population based analysis. J Clin Epidemiol. 2001; 54:407-10.
19. Kenyon AP, Piercy CN, Girling J, Williamson C, Tribe RM, Shennan AH. Obstetric cholestasis, outcome with active management: a series of 70 cases. BJOG. 2002; 109:282-8.
20. Dang A, Agarwal N, Bathla S, Sharma N, Balani S. Prevalence of liver disease in pregnancy and its Outcome with emphasis on Obstetric Cholestasis : An Indian Scenario. J Obstet Gynecol India. 2010; 60(6):413-8.