



INTRAHEPATIC CHOLESTASIS OF PREGNANCY: ADVERSE FETOMATERNAL OUTCOME

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Abstract:

Background: Intrahepatic Cholestasis of Pregnancy (IHCP) has been observed with increased incidence of fetal distress, meconium, preterm labour, intra uterine death, postpartum hemorrhage and increased surgical interferences. So, the present study is designed with an aim to see the trends of fetomaternal outcome among cases of IHCP as well as to find the incidence of IHCP among study population.

Material and Methods: In our study out of 954 deliveries conducted, 48 patients were diagnosed with IHCP. These patients were studied to see the impact of IHCP on fetomaternal outcome.

Results: During the study period (1July 2022 -31Aug 2023), there were 954 deliveries, of which 48 (5.03%) were diagnosed with IHCP without any other co-morbidities. The mean age of these women was 27.23 ± 3.78 years in cases. Among these 43.8% were Primiparous and 56.3% were multiparous. 39 (81.3%) were in age group 20-30 years. The mean period of gestation was found to be $(37.25+0.911)$ week and $(2.9+1.98)$ days. the occurrence of PPH was higher among subjects with IHCP (8.3%) when compared to the subjects without IHCP (4.5%)

Keywords: IHCP, meconium, fetal distress, bile acid, fetal distress, Cesarean section

INTRODUCTION

Pregnancy is a unique physiological phenomenon during which all body systems undergo adaptations and changes during its course, hepatobiliary system being no exception. One such disorder specific to pregnancy is Intra Hepatic cholestasis of pregnancy (IHCP)⁽¹⁾.

IHCP also known as recurrent jaundice of pregnancy, cholestatic hepatitis or icterus gravidarum is a pregnancy specific benign liver disease. It usually presents in the second and third trimester of pregnancy, typically characterized by pruritus with a predilection for palms and soles without any evidence of skin lesions along with biochemical tests demonstrating elevated serum aminotransferases and/or elevated serum bile acid levels, without any underlying liver pathology such as hemolysis, Low Platelets suggestive of HELLP syndrome, hepatitis and obstructive jaundice. There is a spontaneous relief of symptoms and laboratory abnormalities to normal values promptly after delivery or within one month postpartum ⁽²⁾. In the UK, IHCP affects 0.7% of pregnancies in multi-ethnic populations, and 1.2%–1.5% of women of Indian-Asian or Pakistani-

Asian origin^(3, 4). IHCP though relatively non-threatening to women, has been reported to have important fetal implications. Affected pregnancies have been associated with increased perinatal morbidity and mortality. It has been found to be associated with increased risk of preterm delivery, meconium staining of amniotic fluid, fetal bradycardia, fetal distress and fetal demise⁽⁵⁾

Due to lack of any specific antenatal fetal monitoring tests to predict sudden intrauterine fetal deaths among such cases, termination of pregnancy is recommended near 36-37 weeks of gestation to avoid perinatal mortality.^(6,7,8) There is marked variation in incidence and fetomaternal complications of such cases among pregnant women. So, the present study is designed with an aim to see the trends of fetomaternal outcome among cases of IHCP as well as to find the incidence of IHCP among study population.

MATERIAL AND METHODS

This was a retrospective study conducted in the department of obstetrics and gynaecology at CH(AF)B after obtaining ethical clearance from institutional ethical committee, the women with IHCP who delivered between 1 Aug 22 to 31 Jul 23 were taken. The diagnosis of IHCP was based on presence of pruritus, elevated total serum bile acid levels (10 micromol/l)⁽⁹⁾ and serum transaminases (ALT>40 IU/L and AST>35 IU/L)⁽¹⁰⁾

Following patients were excluded from the study:

- (a) Patients with one or more medical diseases such as cardiovascular diseases, oncological, hematological, acute and chronic kidney diseases.
- (b) Patients having liver disorders like viral hepatitis (A, B, C, D, E virus).
- (c) Patients having cholelithiasis, bile duct lithiasis, cholangitis, other abnormalities of liver and biliary tract, alcohol addiction, HIV infection, substance abuse.
- (d) Patients having skin diseases associated with itching and rashes.
- (e) Multifetal pregnancies.

An elective termination of pregnancy was done at 37–38 weeks of gestation in all except those who had spontaneous labor before this gestation. Maternal outcome was observed by considering various parameters like incidence, mean age, parity, postpartum hemorrhage and mode of delivery in case of patient diagnosed with IHCP whereas Fetal outcome was calculated by Incidence of meconium-stained liquor, preterm delivery, respiratory distress and need of NICU admission.

STATISTICAL ANALYSIS

The recorded data was compiled and entered in a spreadsheet (Microsoft Excel) and then exported to data editor of SPSS Version 21. Continuous variables were expressed as Mean±SD and categorical variables were summarized as frequency tables

RESULTS

During the study period, there were 954 deliveries, of which 48 (5.03%) were diagnosed with IHCP without any other co-morbidities. The mean age of these women was 27.23 ± 3.78 years in cases.

- (a) Out of 48 subjects, 39 (81.3%) were in age group 20-30 years. The mean of age was 27.23 ± 3.78 .

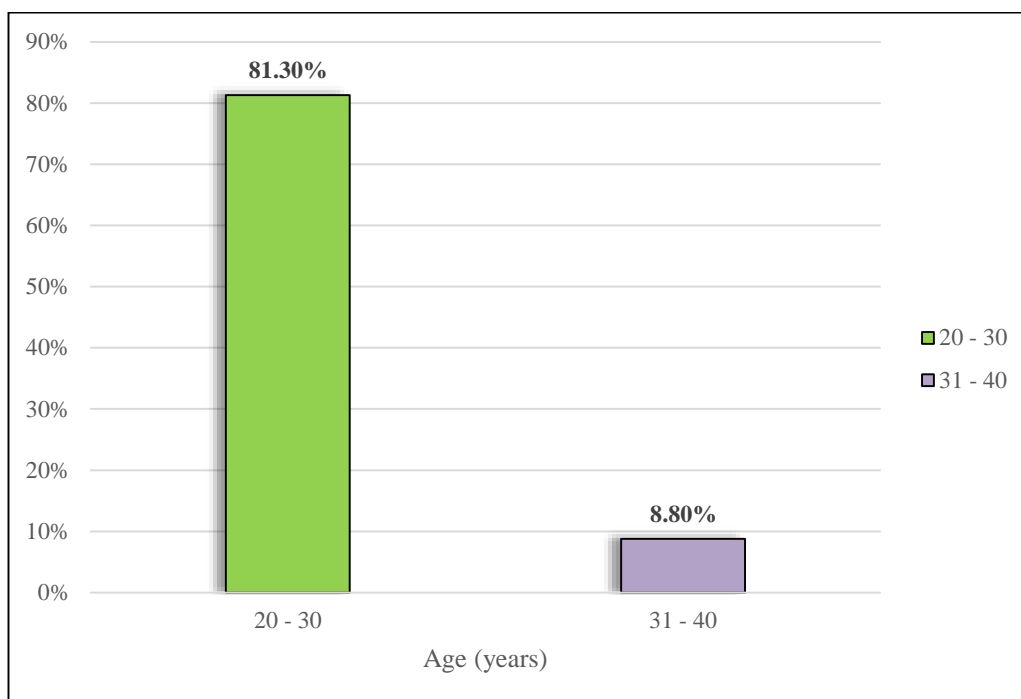


Figure 1: Distribution of subjects according to age (years).

(b) Out of 48 subjects, 43.8% were primiparous and 56.3% were multiparous

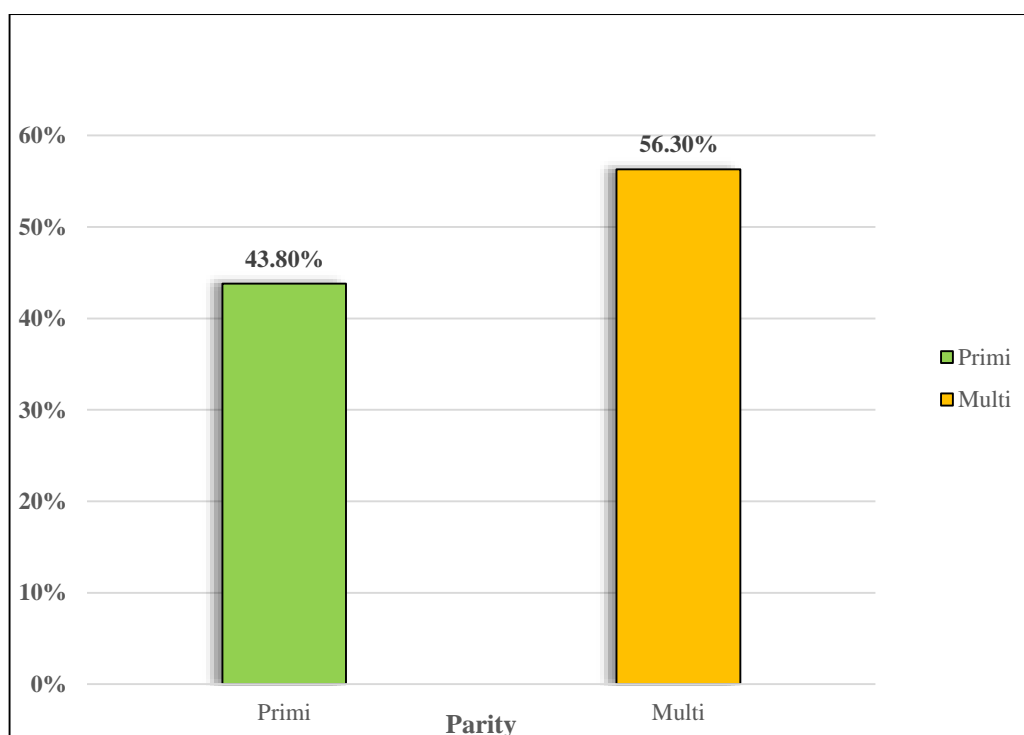


Figure 2: Distribution of subjects according to parity.

(c) Out of 48 subjects, 42 (87.5%) were more than 37wk and 8(12.5%) less than 36 week and 6 days gestation period. The mean period of gestation was found to be (37.25 ± 0.911) week and (2.9 ± 1.98) days

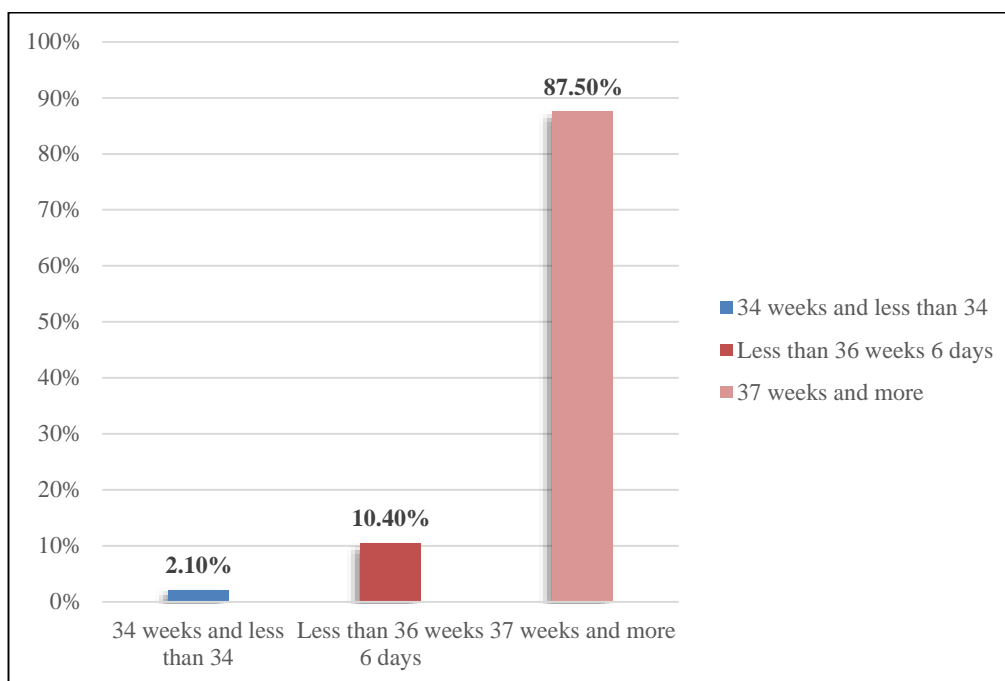


Figure 3: Distribution of subjects according to period of gestation.

(d) In our study the occurrence of PPH was higher among subjects with IHCP (8.3%) when compared to the subjects without IHCP (4.5%)

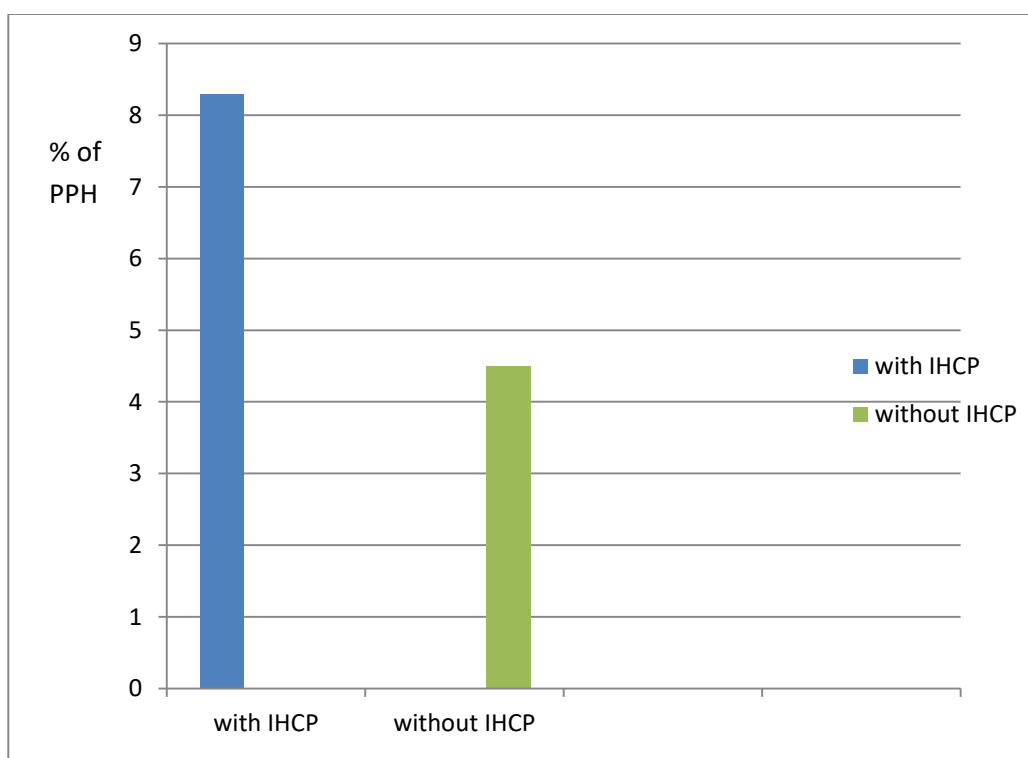


Figure 4: Percentage of patients with Postpartum Hemorrhage.

(e) Out of 48 subjects, 31 (64.58%) had induced (vaginal) labour, 8 (16.66%) had Elective LSCS for previous LSCS.

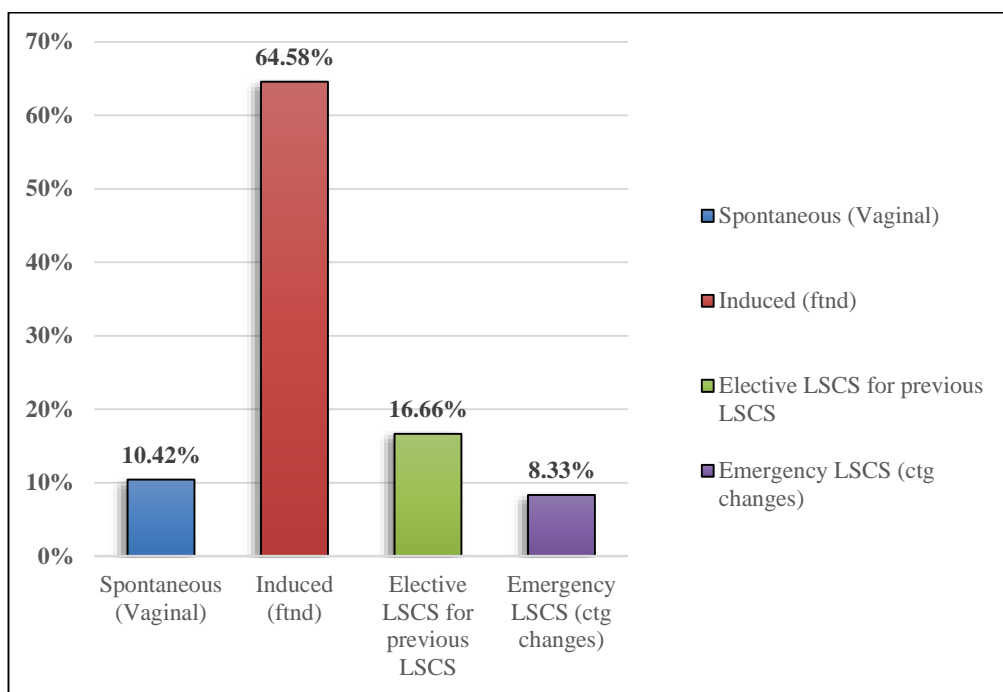


Figure 5: Distribution of subjects according to Labour.

(f) Out of 48 newborn, 22 (45.8%) were Female and 26 (54.2%) were Male

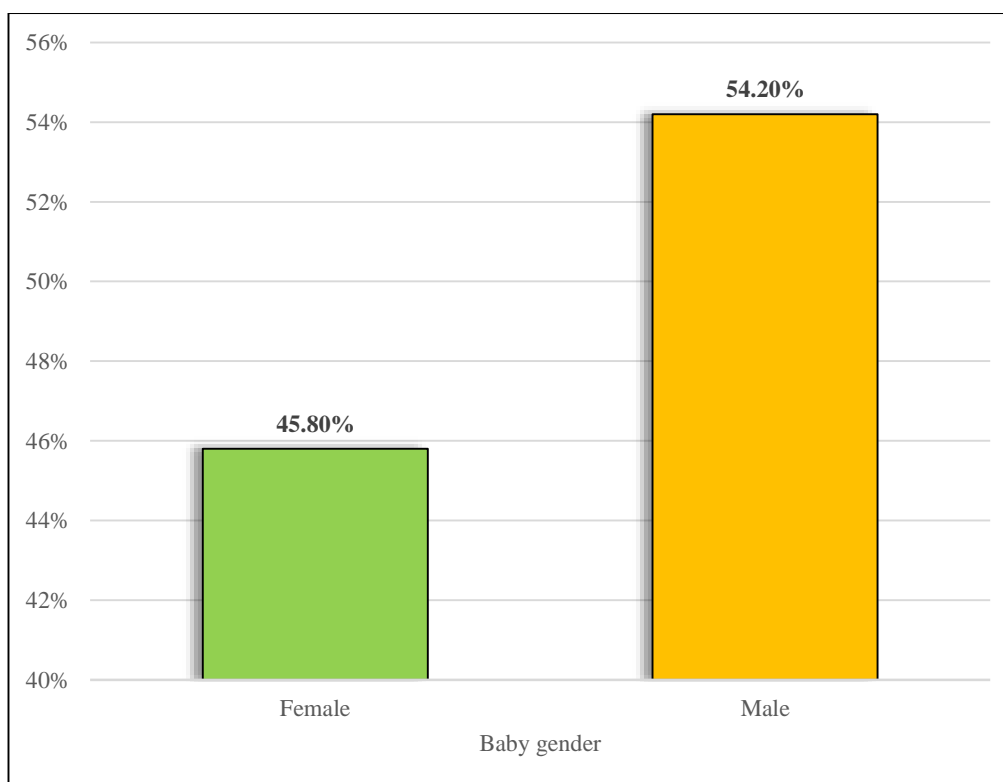


Figure 6: Distribution of newborn according to gender.

(g) Out of 48 newborn subjects, the percentage of various categories is as shown

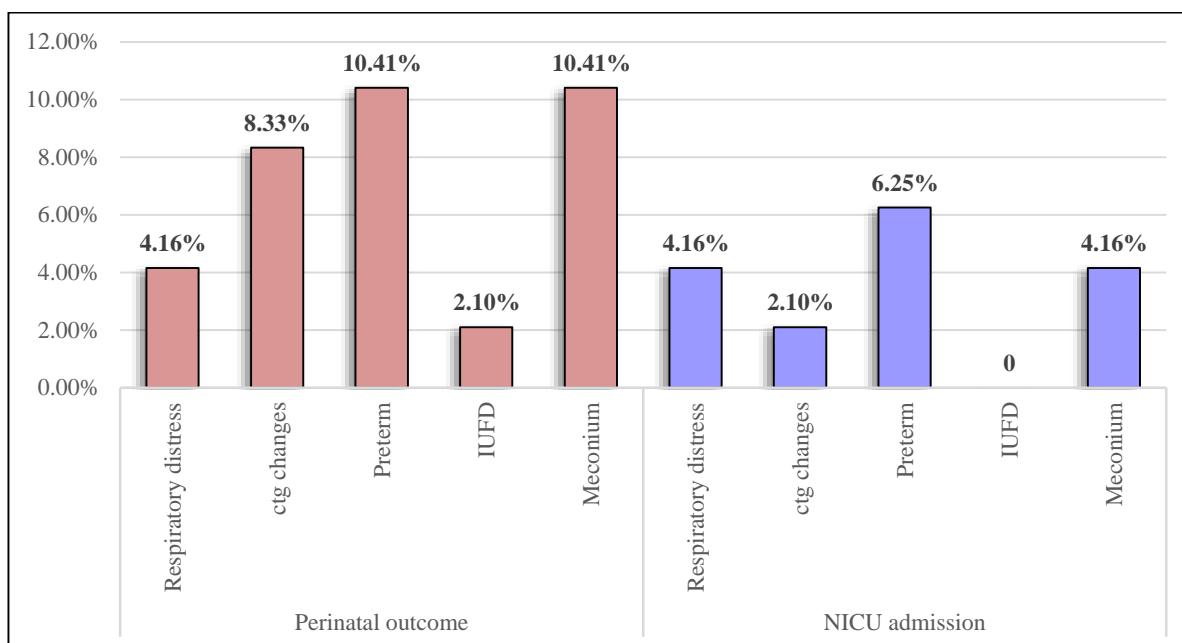


Figure 7: Distribution of subjects according to perinatal outcome and NICU admission

DISCUSSION

Our study, population had incidence of 5.03 % among IHCP subjects similar to Arora S et al⁽¹¹⁾ who had 4.08% in their study. Our centre being a tertiary care centre might explain the incidence on a higher side and being an Armed Forces Hospital covers population of patients from different geographical areas. Majority of the reported studies showed that the IHCP is more common in multigravida women with advanced maternal age^(12,13) which is in accord with our study where IHCP was found more in multigravida 56.20%. The mean age of participants in our study population was 27.23 ± 3.78 similar to study conducted by Mortan and Laurie⁽¹⁴⁾ where, the mean age was 29 yr. The study conducted by Rafia Aziz et al⁽¹⁵⁾ was also in agreement with our study. The occurrence of PPH was higher among subjects with IHCP (8.3%) when compared to the subjects without IHCP (4.5%). In our study, preterm delivery rate was 12.5% and there is no significant difference in overall preterm birth rate i.e. 12.6% (ranging from 8.6% in Belagavi, India to 21.8% in the Pakistani) as per study conducted by Yamini V. pusdekar et al⁽¹⁶⁾. The mean gestational age of delivery(weeks, days) was 37.25 ± 0.911 and 2.9 ± 1.98 , contrary to this Shobaili et al⁽¹⁷⁾, reported the mean gestational age was in late preterm range (36.63 ± 2.57 weeks) in their study population. Present study also showed 10.41% delivery complicated by MSL. Asulum A et al⁽¹⁸⁾ reported that IHCP was associated with 44.3% rate of MSL in their study. Over all NICU admissions and still birth in present study were 16.6% and 2.08% respectively. Study reported by Mahajan N et al⁽¹⁹⁾, also reported the NICU admission rate of 16%.

CONCLUSION

IHCP is associated with adverse fetal (preterm, meconium, fetal distress) and maternal (postpartum hemorrhage, surgical interferences) outcomes. One of the frequent causes of hepatic impairment in pregnancy, so timely and efficient intervention is required to prevent adverse outcomes.

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