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Intrahepatic Cholestasis of Pregnancy for Emergency Caesarean Section: Anaesthetic Management

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ABSTRACT: Intrahepatic cholestasis of pregnancy is a pregnancy-specific liver disorder. It is a severe form of Jaundice in pregnancy and is associated with perinatal mortality. Maternal prognosis might be good but delayed delivery can lead to fatal outcome for the foetus. Timely diagnosis and early intervention can lead to better perinatal outcome. Here, we report anaesthetic management of a primigravida with intrahepatic cholestasis of pregnancy in second stage of labour with deep transverse arrest posted for emergency caesarean section.

KEY WORDS: Intrahepatic cholestasis of pregnancy, pregnancy specific, early intervention

I. INTRODUCTION

Intrahepatic cholestasis of pregnancy (IHCP) is a reversible pregnancy-specific, liver disorder. It is a cholestatic disorder characterized by - (i) Pruritus with onset in the second or third trimester,(ii) Elevated serum aminotransferases and bile acid levels,(iii) Spontaneous relief of signs and symptoms within two to three weeks after delivery.[1, 2,3]. Also known as obstetric cholestasis, Pruritus gravidarum, or Icterus gravidarum[3].Sometimes symptoms are so severe that early termination of pregnancy is consideredIncidence is 0.02% to 2.4% of all pregnancies, varying widely with geographical location and ethnicity. In Indian population, incidence is1.24% [2] .Aetiology is complex, likely to result from the cholestasis effects of reproductive hormones and their metabolites in genetically susceptible women [4]. Here we report perioperative management of a parturient with IHCP posted for emergency caesarean section under general anaesthesia.

II. CASE REPORT

A 28-year-old, unregistered, full term, primigravidapresented with history of pruritus since two months and severe jaundice along with yellowish discoloration of skin, scleraand urine since ten days. She was posted for emergency caesarean section in view of deep transverse arrest in second stage of labour. There was no significant past history.On examination,HR 90/min, NIBP 124/84 mmHg, icterus was present and pitting oedema on both feet. Systemic examination was within normal limits. Patient had full meal 3hours back and none of the investigations were available. Blood was sent for biochemical tests and viral markers.

Universal safety precautions were taken and general anaesthesia planned in view of uninvestigated jaundice in pregnancy. Rapid sequence induction with thiopentone 250mg, succinylcholine 100mg andintubated with 7mm ID endotracheal cuffed tube. Maintained onO2:Air, isoflurane 0.6-0.8% andatracurium.A low birth weight baby (1.8 kg) was delivered, cried after primary resuscitation. Apgar score 7 at 1minute and 10 at 3minutes.After baby delivery, I.V. Oxytocin 20IU in 500ml RL started. I.V. Midazolam 1mg and Fentanyl 50µg was given. Estimated blood loss was 700ml and Urine output 50ml/hr.Patient reversed and shifted to recovery room for observation.

Investigations revealedraised Total bilirubin (7.4mg/dl), direct bilirubin (5.1mg/dl), indirect bilirubin (2.3mg/dl) and alkaline phosphatase(486.6IU/l).SGOT, SGPT, PT/INR were normal. CBC,renal function tests and viral markers and

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USG report were within normal limits. Diagnosis of Intrahepatic cholestasis of pregnancy was made by exclusion.Carbohydrate diet and urodiolwere started for treatment of jaundice. Patient improved symptomatically in immediate postpartum period with normal bilirubin levels by seventh day.

III. DISCUSSION

IHCP occursin late second or early third trimester of pregnancy. It is characterized by pruritus mainly in the palms and soles, elevated serum aminotransferases and raised serum bile acid levels (10- 40µmol/L)[5,6] with spontaneous relief of symptoms and normalisation of laboratory findings immediately postpartum[6], as was in our patient.Serum alkaline phosphatase level rises 7–10 times normal, but are difficult to interpret due to elevation of the placentalisoenzyme.[6,7]Prothrombin time is usually normal, but when raised denotes vitamin k deficiency[8]. There is increased chances of recurrence in subsequent pregnancies up to 45–70 %[9]. IHCP is always a diagnosis of exclusion, other causes of jaundice such as viral hepatitis, acute fatty liver of pregnancy, hyperemesis gravidarum, chronic liver diseases like primary biliary cirrhosis, primary sclerosing cholangitis or chronic hepatitis C should be ruled out[9].

Maternal prognosis is usually good but increased risk of foetal outcome such as preterm delivery, preterm delivery , meconium staining of amniotic fluid, foetal bradycardia, foetal distress and foetal loss, particularly when associated with fasting serum bile acid levels >40µmol/L[8,9].Undiagnosed coagulopathy increases the risk of intrapartum and postpartum haemorrhage. Cautious use of opioids and other anaesthetic drugs is required.

Aim of treatment of IHCP is to relieve pruritus, decrease increased level of bile acids and improve perinatal outcome. Ursodeoxycholic acid (UDCA), a tertiary bile acid, commonly used in treatment ofcholestatic liver diseases, in dosage of 1g (14mg/kg/d) seems to be sufficient to improve the biochemical parameters and relieve pruritus[10]. It has been reported that UDCA even with the higher doses (1.5g) is safe both for the mother and the fetus.

IV. CONCLUSION

IHCP has low maternal morbidity but has grave effects on the fetus. This case emphasizes the fact that IHCP should be considered as an important differential diagnosis of parturient with jaundice in third trimester. Early diagnosis and careful foetalassessment and appropriate medical intervention will improve both maternal and foetaloutcome.

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