Induction of Labor at less than 38 weeks in Cholestasis of Pregnancy: A Six-Year Cohort
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OBJECTIVE: Cholestasis of Pregnancy is an under recognized cause of perinatal morbidity and mortality. It has been shown to disproportionately affect Latina communities where the prevalence of the disorder is reported to be relatively high. Antepartum testing has not been shown to reliably predict or reduce the incidence of stillbirths in patients with cholestasis. The purpose of this study is to review the clinical outcomes of pregnancies diagnosed with cholestasis and managed using our institutional protocol which recommends amniocentesis at 36 weeks gestation followed by induction of labor in the presence of fetal lung maturity.

STUDY DESIGN: From January 1, 2006 to December 31, 2011, 332 patients were diagnosed with cholestasis of pregnancy (pruritus associated with Total Bile Acids >14mg/dl) and managed prospectively using a single institutional protocol. The protocol recommended the induction of labor for women diagnosed with mild (TBA <40) and severe cholestasis (TBA ≥ 40) between 36 and 38 weeks gestation after verifying lung maturity via amniocentesis. Patients diagnosed with severe disease between 34-36 weeks were also offered amniocentesis to verify lung maturity and to rule out the presence of meconium. The average TBA level, the average gestational age at delivery, birth weight, primary cesarean delivery rate, stillbirths, and the incidence of respiratory distress syndrome were reviewed.

RESULTS: Out of the 332 women diagnosed, 195 underwent induction of labor at less than 38 weeks. The average TBA level for the cohort was 54.45 +/- 33.00mg/dl. The average gestational age at time of delivery was 36.52 +/- 0.95 weeks. The average birth weight was 2902 +/- 320gm. The primary cesarean was 12.8% (16/125) for those induced <38 weeks and 12.8% (25/195) for all patients induced. This compares favorably with our institutions’ primary cesarean rate over this time period of 14.5%. The incidence of respiratory distress was also not increased versus our general obstetric population. There were 3 stillbirths recorded with an adjusted stillbirth rate of 3.01/1000 births.

CONCLUSION: This study is the largest prospective U.S. cohort to date. The Metropolitan Intrahepatic Cholestasis of Pregnancy Protocol reduces perinatal morbidity and mortality without increasing the primary cesarean rate or the incidence of respiratory distress syndrome. Induction of labor between 36-38 weeks is a viable clinical option for patients diagnosed with cholestasis of pregnancy.

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Metropolitan Intrahepatic Cholestasis of Pregnancy Protocol

**Clinical Pruritus**
24-34 wks. gestation

- HCV Screening, Liver Function test, Total Bile Acids
- **Positive HCV**
- Negative HCV; TBA ≤ 14
- Negative HCV; TBA ≥ 15
- Negative HCV; TBA ≥ 40

**Excluded**
If persistent symptoms, repeat TBA in 2 wks.

**Mild Cholestasis**

- **Begin Actigall**
- Repeat TBA and LFT’s in 2 wks., Antepartum testing

**Severe Cholestasis Protocol**

- Amniocentesis at 36-38 wks.
- (+) FLM
- (+) Meconium
- (-)FLM, (-) Meconium

- **Induce**
- Induce
- Induce in 7 to 10 days

**Severe Cholestasis @ 24-36 wks.**

- Begin Actigall, repeat TBA and LFT’s in 2 wks.
- Antepartum testing, steroids for fetal lung maturity

- Amniocentesis at 34 wks.
- (+) FLM
- (+) Meconium
- (-)FLM, (-) Meconium

- **Induce**
- Induce
- Repeat amniocentesis at 36 wks.