



Retrospective cohort study into incidence and birth outcomes of Intrahepatic Obstetric Cholestasis of pregnancy at a tertiary teaching hospital

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Background

- ▶ Intrahepatic cholestasis of pregnancy (ICP) increases pregnancy risk, and although uncommon the increased risk of stillbirth can cause maternal anxiety and depression.
- ▶ The incidence varies depending on population
- ▶ Stillbirth in ICP is likely due to acute anoxia
- ▶ Diagnostic criteria for and management of ICP are not well defined in Australia
- ▶ We aimed to determine the prevalence and pregnancy outcomes of ICP at The Canberra Hospital (TCH)

Methods – data collected during patient note audit

| Description | Data collected |
|---|---|
| Demographic information | Age, ethnicity, BMI, family history, previous contraception, assisted conception, and previous pregnancy outcomes. |
| Pathology result and ordering information | <ul style="list-style-type: none">- LFT pathology, including Bilirubin, Aspartate aminotransferase, and Alanine aminotransferase.- Bile acid pathology ($\mu\text{mol/l}$). |
| Diagnosed pruritus | Clinical itch with non-pregnancy causes excluded |
| Direct mention of the following in the electronic note: | <ul style="list-style-type: none">- Obstetric cholestasis- Intrahepatic cholestasis of pregnancy- Liver disease of pregnancy |
| Management and monitoring | <ul style="list-style-type: none">- Medication use- Pathology, CTG and ultrasound |
| Pregnancy outcomes | Gestational age of diagnosis, stillbirth, gestational age at delivery, birthweight, PPH, caesarean section rate, assisted delivery rate, IOL rate, NICU admission, follow-up |

Results – demographics comparing all pregnancies and ICP group

| Description | Non-ICP (n=10364) | ICP (n=66) | P-value |
|-------------------------------|----------------------|---------------|------------------|
| Maternal age | 30 | 29.6 | >0.05 |
| Booking BMI >35 | 903 (8.7%) | 8 (12.1%) | >0.05 |
| Gestational age at delivery | 39.3 | 37 | <0.001 |
| IOL | 2841 (27.4%) | 44 (66.7%) | <0.001 |
| Mean birth weight | 3.283 | 3.02 | >0.05 |
| Caesarean section | 2943 (28.4%) | 25 (37.9%) | >0.05 |
| Assisted – Forceps | 707 (6.8%) | 8.0 (12.2%) | >0.05 |
| Assisted – Vacuum | 711 (6.9%) | 0 (0%) | N/A |
| Diabetes (GDM, T2DM, T1DM) | 1760 (16.9%) | 27 (40.9%) | <0.001 |
| Admission to NICU (36.0-42.1) | 365 (3.5%) | 1 (1.5%) | >0.05 |
| Stillbirths | 121 (1.2%) | 0 (0%) | >0.05 |
| Twin birth rate | 252 (2.4%) | 9 (13.6%) | <0.01 |

Results

- ▶ 99% of women presented with pruritis
- ▶ Management of ICP
 - ▶ 100% pathology performed
 - ▶ 87.9% had deranged LFTs
 - ▶ 83.3% had elevated bile acids
 - ▶ 35.7% induction booked at diagnosis
 - ▶ 34.8% were monitored with CTG
 - ▶ 63.6% were monitored with pathology
 - ▶ 68.1% had an obstetric ultrasound
 - ▶ 16.7% had a upper abdominal ultrasound and liver panel performed
- ▶ Treatment for ICP
 - ▶ 65.2% ursodeoxyholic acid prescribed
 - ▶ 43.9% antihistamines
 - ▶ 18.2% emolients

Conclusion

- ▶ ICP pregnancies had higher induction rates at earlier gestations
 - ▶ This did not result in statistically significant lighter babies or more NICU admissions
- ▶ There was no difference in caesarean section rate, instrumental deliveries or stillbirths between ICP and all pregnancies
- ▶ The treatment methodology for ICP pregnancies results in similar outcomes to other pregnancies
- ▶ Larger multicentre observational studies are required to determine stillbirth rate and reduction with early IOL

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