



Cholestasis of pregnancy and pregnancy outcomes

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Introduction

Intrahepatic cholestasis of pregnancy (ICP) is the most common pregnancy-related liver disorder. It occurs in the second half of pregnancy-associated with pruritis and increased bile acids. Spontaneous resolution occurs after delivery (1). The pathogenesis is poorly understood, with possible inflammatory, immunologic, and genetic influences, as well as pre-existing hepatobiliary disease (2).In the UAE, the incidence of ICP is around 1% (3). In the UK, the incidence ranges from 0.7% in multi-ethnic groups, to 1.2 – 1.5% in women of South Asian origin (India and Pakistan)(4)

Objective

The primary objective of this study is to examine the relationship between bile acid levels and pregnancy outcomes.

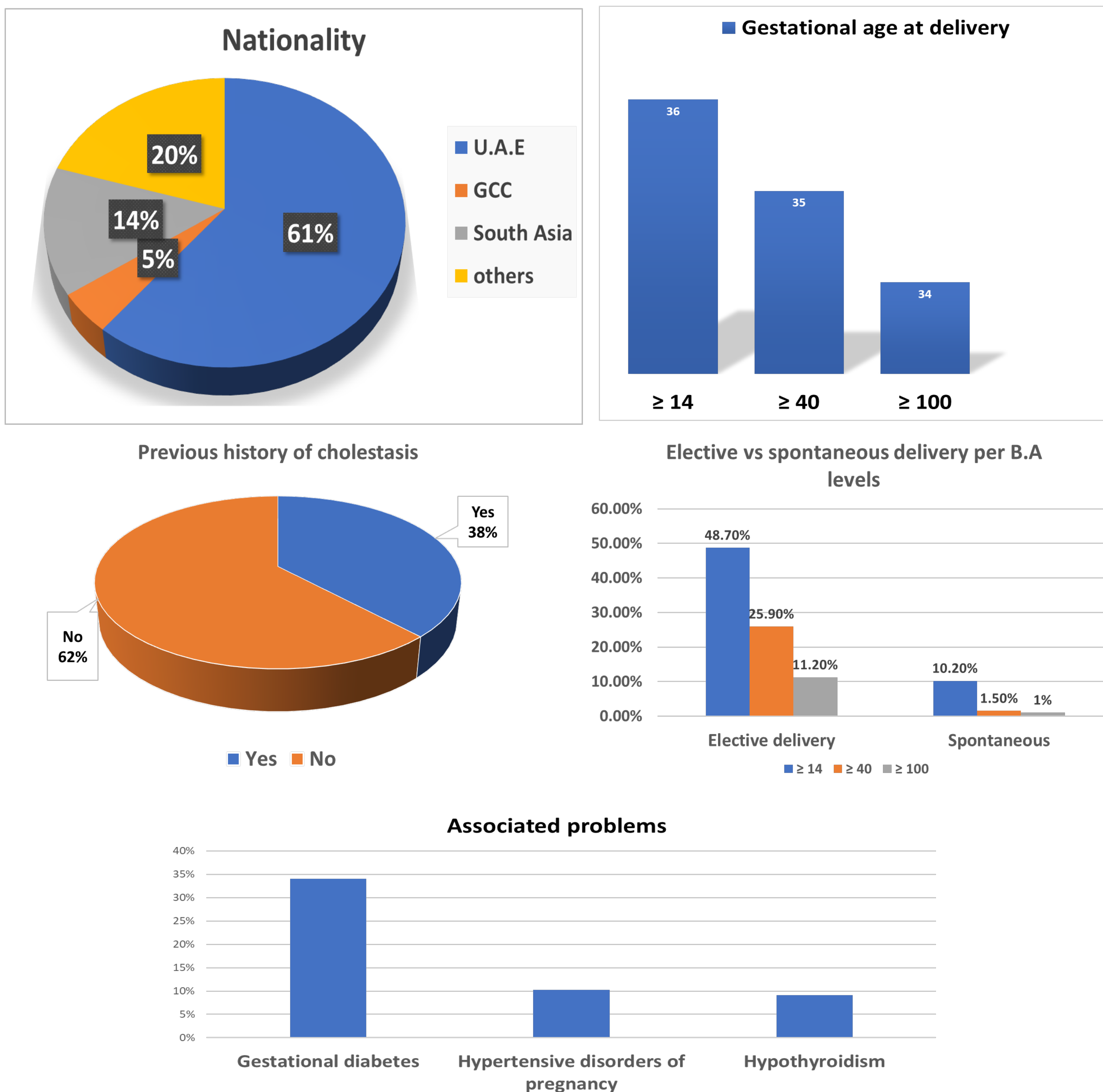
Design

This is a retrospective cohort study conducted at a tertiary maternity hospital in the UAE. The study was conducted between 1st January 2017 and 31st December 2019. The electronic medical records of all women with bile acid levels $\geq 14\mu\text{mol/L}$ were reviewed. The study subjects were classified into 3 groups, a mild disease group with bile acids $14\mu\text{mol/L} - 39\mu\text{mol/L}$, a moderate disease group with bile acids $40\mu\text{mol/L} - 99\mu\text{mol/L}$, and a severe disease group with bile acids $\geq 100\mu\text{mol/L}$.

Methods

The laboratory database of the hospital's electronic medical records was reviewed to extract the data of all women with bile acids $\geq 14\mu\text{mol/L}$. 217 files were reviewed, and only the records of women who continued till delivery were included. The patient demographics, maternal outcomes and associated morbidities, and foetal outcomes were assessed.

Results



A total of 197 women continued till delivery, with 230 babies delivered. 71% of women had mild obstetric cholestasis, and the average gestational age at delivery was 36 weeks. Moderate obstetric cholestasis affected 27% of women, and their average gestational age at delivery was 35 weeks. For the severe obstetric cholestasis group, they made up 11% of women, and the average gestational age at delivery was 34 weeks. 85.8% of women had elective delivery, and 14.2% underwent spontaneous labour. Higher bile acid levels were associated with earlier gestational age at diagnosis and earlier delivery. 43% of women were delivered by caesarean section, 25% elective, and 18% by emergency sections. The incidence of gestational diabetes in the study group was 30.1%. Hypertensive disorders of pregnancy complicated 10.2% of cases, and 9.2% of women had hypothyroidism. 38% of multigravidas had a history of obstetric cholestasis in previous pregnancies. There was one stillbirth, a woman presenting with IUFD at 28 weeks, and bile acids were elevated on stillbirth screening. 7.6% of pregnancies were complicated by small for gestational age babies. 8.1% of babies were admitted to the neonatal unit, out of which 75% were due to prematurity

Conclusion

Timely management and induction of women with obstetric cholestasis help reduce stillbirths. 30% of women had Gestational diabetes mellitus, which incidentally has a high prevalence in the UAE pregnant women. Further research is needed to establish a possible relationship between elevated bile acids and gestational diabetes.

References

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