The Insatiable Itch and COVID-19: A New Wave of Intrahepatic Cholestasis of Pregnancy During the COVID-19 Pandemic?

***Dr Sophie Lassila*[1], *Dr Sally Byford*[1]**

[1]*Gold Coast University Hospital, Queensland*

RANZCOG Annual Scientific Meeting 2022 GOLD COAST

Transformation: Making Waves

Introduction

During the current COVID-19 outbreak, an increase in diagnoses of intrahepatic cholestasis of pregnancy (ICP) was noted at our tertiary hospital. ICP and COVID-19 are associated with adverse perinatal outcomes, such as preterm birth, and there is limited research on the impact of both ICP and COVID-19 on pregnancy and perinatal outcomes for women and neonates.

One study has found an increased risk of severe ICP, as well as higher peak serum bile acid levels and transaminase levels in patients during the COVID-19 pandemic when compared to the pre-pandemic cohort. However, this same study did not find an increase in the incidence of ICP during the COVID-19 pandemic when compared to pre-pandemic incidence.[1]

Other case studies have suggested that COVID-19 infection may increase the risk of severe hepatic impairment in patients with ICP.[2,3]

Objectives

The primary aim was to determine ICP incidence before and during the COVID-19 outbreak and the relationship between ICP and COVID-19 incidences. Secondly, we aimed to determine ICP severity in patients with and without a history of COVID-19 infection during their pregnancy using mean peak serum bile acid levels.

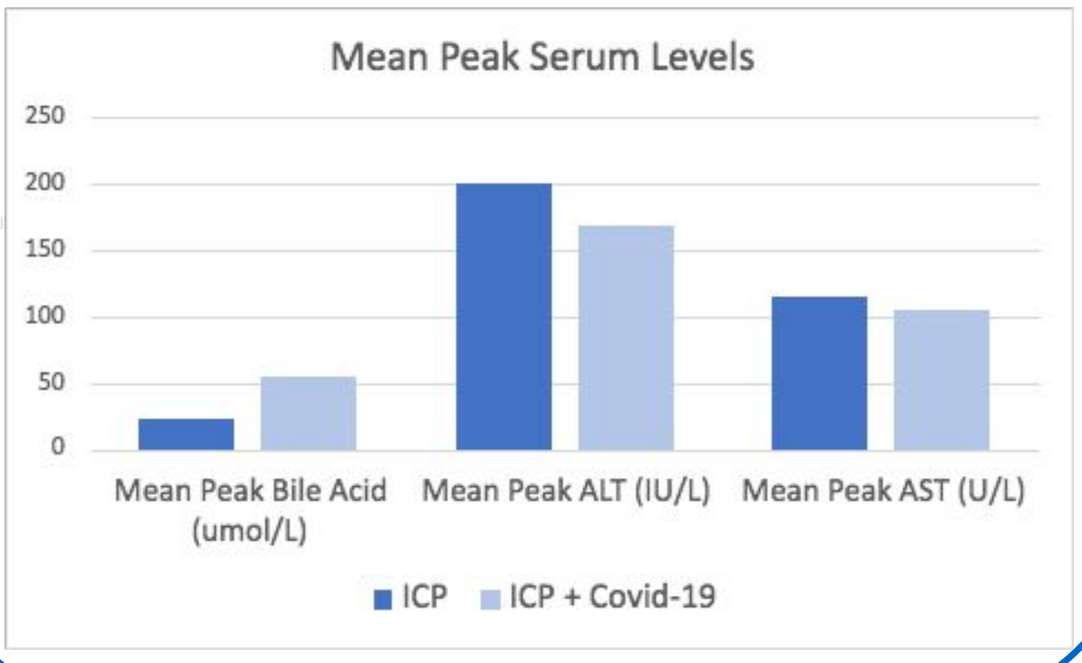
Methodology

A retrospective cohort study was performed through chart reviews of patients with ICP diagnoses prior to the COVID-19 outbreak onset (September – December 2021) and after outbreak commencement (January – April 2022).

Results

Pre-outbreak incidence of ICP was 0.0033, with an increase during the COVID-19 period to 0.0076. Half of the patients in the COVID-19 period had a history of COVID-19 infection during their pregnancy, compared to no patients pre-outbreak. Mean peak serum bile acid levels in patients with ICP and COVID-19 was more than twice the level for patients with ICP alone during both time periods (55.6 umol/L and 22.9 umol/L respectively). Patients with ICP alone had slightly higher mean peak transaminase levels compared to patients with ICP and COVID-19 infection.

	Pre-Outbreak	Outbreak
Total births	1830	1842
ICP cases	6	14
COVID-19 cases	0	7
Incidence ICP	0.00328	0.00760
Incidence COVID-19	0.00000	0.00380



Discussion & Conclusion

These results indicate double the incidence of ICP and disease severity (as measured by peak serum bile acids) in patients with both ICP and history of COVID-19 compared to patients with ICP alone. Interestingly, this study did not demonstrate increased transaminase levels in patients with ICP and COVID-19 as with previous published data. This may be due to the small size of this study. Further research is required to investigate these relationships and the pathophysiological links between ICP and COVID-19. This will assist in guiding patient care and understanding how we can optimise perinatal outcomes, such as indication and timing for iatrogenic preterm birth, in these uncharted times.

References

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