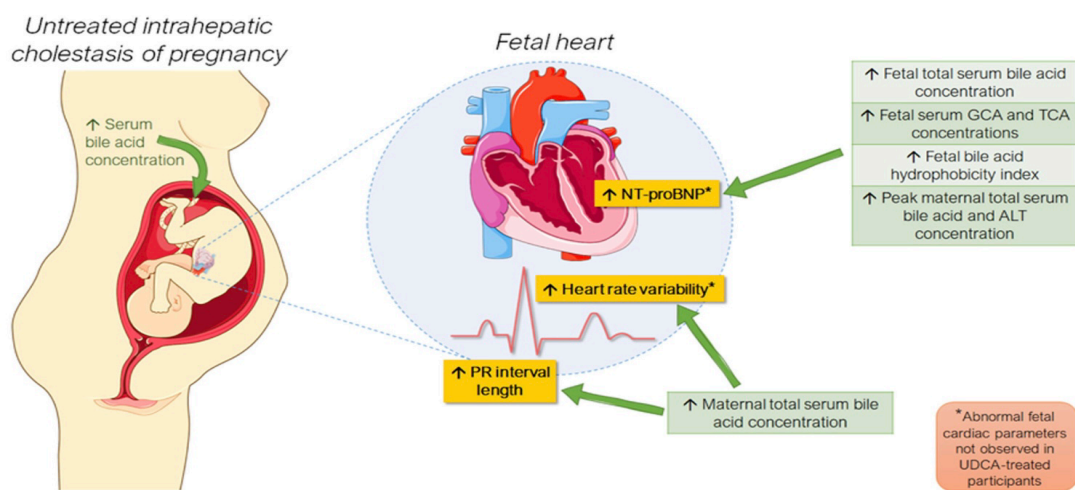


INTRODUCTION

ICP is associated with increased risk of sudden stillbirth. Fetal complications like preterm, RDS, MSL, stillbirth, NICU admission & neonatal morbidity are seen. It mainly affects patients in second and third trimester. Most commonly used methods of antenatal fetal surveillance like NST/CTG or USG cannot prevent or predict stillbirth in ICP.



AIM

1. To study maternal bile acid levels in Intrahepatic Cholestasis of Pregnancy (ICP).
2. To study the maternal & fetal outcomes in ICP.

OBJECTIVES

1. To study the incidence of ICP
2. To evaluate maternal bile acid levels.
3. To asses the correlation of ALP, liver transaminase enzymes with total bile acids in ICP

METHODOLOGY

Place of Study: Department of Obstetrics and Gynaecology, Heritage Institute of Medical Sciences, Uttar Pradesh
Study design: Prospective observational study
Study Period: July 2023 - Jan 2025, Sample Size: 71

THE INCLUSION CRITERIA

1. Pruritus without primary skin lesion
2. Diagnosed ICP (unexplained pruritis with Bile acid >10 micromol/ L)

EXCLUSION CRITERIA:

1. Acute fatty liver of pregnancy(AFLP)
2. Dermatological diseases with itching

RESULTS

Lab parameter	Baseline				After 4 weeks therapy	
	Group I(ICP) N = 71	Group II Pregnant controls N = 50	p value	Group III Non-pregnant controls N = 35	Group IICPN = 71	% Reduction
SB (mg/dl) Mean ± SDRange	0.94 ± 0.79(0.2–5.2)	0.6 ± 0.08 (0.2–0.8)	0.067	–	0.66 ± .04	29.7%
AST (U/L) Mean ± SDRange	173.38 ± 139(17–566)	28.9 ± 8.2 (17–40)	0.001	–	76.8 ± 63.6 (20–311)	55.8%
ALT (U/L) Mean ± SDRange	177.7 ± 151.7(11–521)	27.1 ± 6.8(18–39)	0.001	–	73.58 ± 62.5 (15–253)	58.8%
ALP (U/L) Mean ± SDRange	475.85 ± 208 (90–1143)	103.3 ± 58.4 (38–234)	0.001	–	252.7 ± 210 (48–1025)	50.4%
Serum BA (µmol/L) Mean ± SDRange	75.9 ± 39.5 (23–213)	29.2 + 5.7(18.9–35.6)	0.001	5.9 ± 1.8 (4.8–7.2)	41.26 ± 15.4(23–108)	45.6%

Rate of pooled risk of fetal bradycardia and meconium stained liquor (MSL) in different ranges of biochemical parameters; and proposed Nutan scoring for ICP

Parameter	Range	Range-wise distribution of patients(n = 71)	Occurrence of MSL/fetal bradycardia(Range-wise details of 23* patients)n (%)	P value	Proposed ICP Scoring	Documentation
Bile acids(BA) (In µmol/L)	< 40	8	1/8 (12.5%)	p = 0.008	0	BA ₀
	40- < 80	32	7/32 (21.8%)		1	BA ₁
	80- < 120	21	7/21 (33.3%)		2	BA ₂
	120- < 200	8	6/8 (75%)		3	BA ₃
	≥ 200	2	2/2 (100)		4	BA ₄
Aminotransferase (AT) (In IU/mL)	< 100	31	5/31 (16.1)%	p = 0.016	0	AT ₀
	100- < 200	17	5/17 (29.4%)		1	AT ₁
	200- < 400	15	7/15 (46.6)%		2	AT ₂
	400- < 500	7	5/7 (71.4)		3	AT ₃
	≥ 500	1	1/1 (100%)		4	AT ₄
Serum bilirubin** (SB)	< 0.8	29	2/29 (6.8%)	p = 0.001	0	SB ₀

REFERENCES

1. Geenes V, Williamson C. Intrahepatic cholestasis of pregnancy. World J Gastroenterol. 2009;15:2049–2066. doi: 10.3748/wjg.15.2049. [PMC free article] [PubMed] [Crosss