



Predicting preterm birth from symptom onset: the role of gestational age at pruritus onset in suspected intrahepatic cholestasis

Mariela Alejandra Cori-Arias , María Pía Gutarra-Gutarra , Martín Inga-Lozada , Mary Mejia-Guizado , Ronal Araujo-Huamani

INTRODUCTION

Intrahepatic cholestasis of pregnancy (ICP) occurs in approximately 2% of pregnancies and generally follows a benign maternal course; however, it increases the risk of stillbirth and preterm birth. Several factors associated with prematurity have been described.

This study aimed to assess the importance of gestational age at pruritus onset in pregnant women with suspected ICP and its relationship with preterm birth.

METHODS

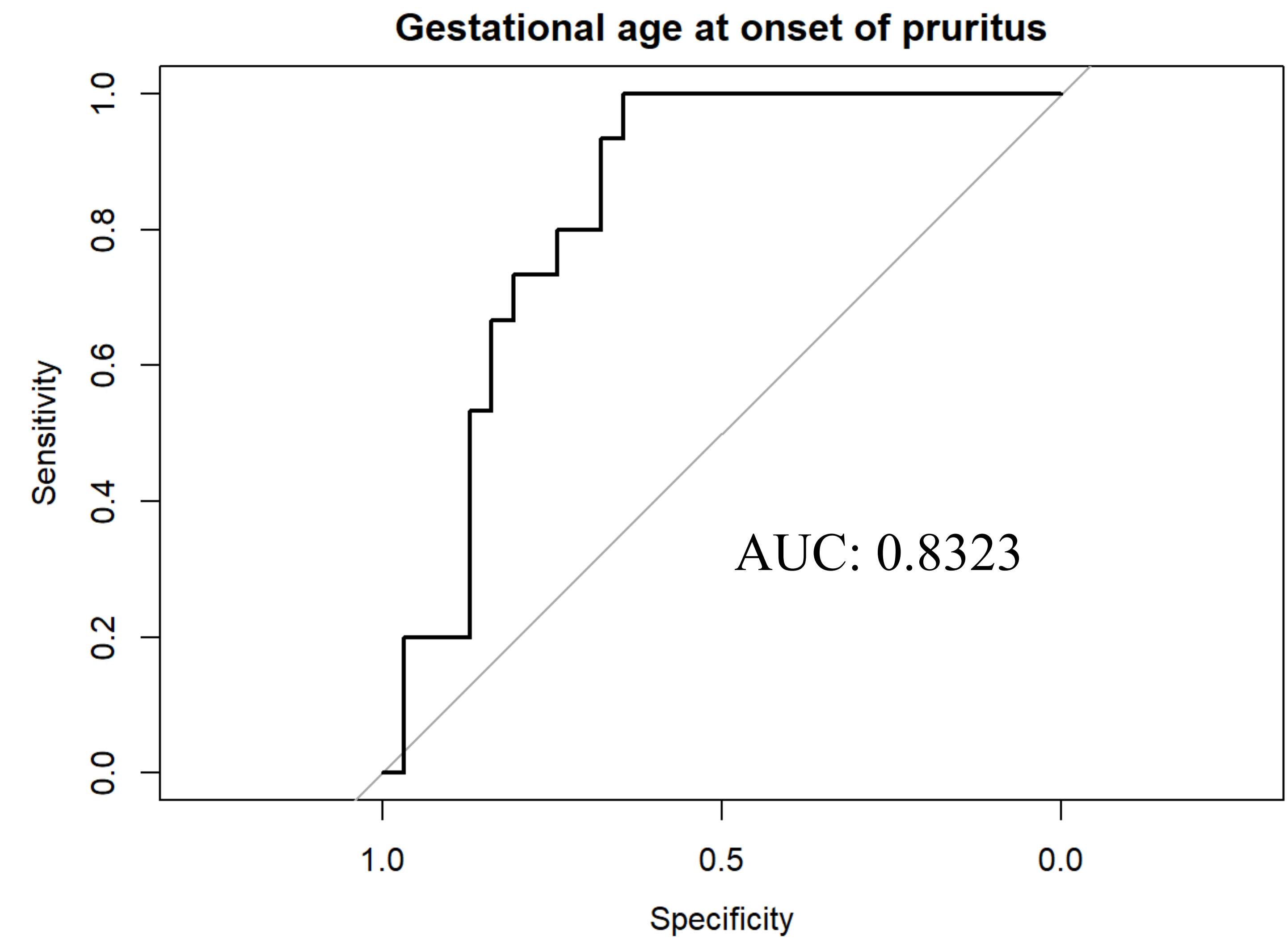
A retrospective cohort study was conducted, reviewing 98 patients attended at a hospital in Lima, Peru (2025). Pregnant women aged 18 years or older with pruritus and suspected ICP were included regardless of biochemical confirmation; those with chronic liver disease, autoimmune disease, neoplasms, or fetal malformations were excluded. Bivariable and multivariable Poisson regression analyses were performed to estimate relative risks (RR) for preterm birth. In addition, discriminative performance was assessed using ROC curves (AUC) and an optimal cutoff point to predict preterm birth. Statistical significance was set at $p < 0.05$.

RESULTS

A total of 46 pregnant women were included. In multivariable analysis, gestational age at pruritus onset was independently associated with a lower risk of preterm birth. Gestational age at pruritus onset also showed good discriminative ability for preterm birth (AUC = 0.83), with an optimal cutoff of 36 weeks.

Table N°1: Bivariate and multivariate analysis in pregnant women with ICP and prematurity				
	Crude RR(95% CI)	p	Adjusted RR (95% CI)	p
Age	1.02 (0.97–1.08)	0.261		
Gestational age at pruritus onset	0.88 (0.8–0.96)	0.004	0.88 (0.81–0.96)	0.0052
BMI	0.96 (0.89–1.04)	0.352		
ALT	1.03 (1–1.07)	0.078	1.03 (0.99–1.07)	0.070
ALP	1.00 (0.96–1.04)	0.922		

Image N°1: ROC curve of gestational age at the onset of pruritus



CONCLUSIONS

Gestational age at pruritus onset may be a simple and clinically useful predictor of preterm birth in pregnant women with suspected intrahepatic cholestasis, particularly in settings where bile acid testing is unavailable. Each additional week at symptom onset was associated with an approximate 12% reduction in the risk of preterm birth. These findings should be interpreted in light of the retrospective single-center design and limited sample size.