Early Second Trimester Intrahepatic Cholestasis of Pregnancy with a Good Perinatal Outcome

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INTRODUCTION:

Intrahepatic cholestasis of pregnancy (ICP) is an exclusive liver disease of late pregnancy, usually confirmed by elevation of serum bile acids and liver enzymes[1-3]. The incidence of ICP ranges from 0.2 to 28%, and up to 80% of cases present after the 30 weeks of gestational age (WGA)[1,2]. Genetic mutations in the ABCB11 and biliary transporter ABCB4 (MDR3) genes have been related in almost 15% of cases with family predominance, and previous surgical history of cholecystectomy[1-3]. Clinical presentation is characterized by pruritus, and jaundice[1-3]. ICP can lead to serious fetal complications like premature birth, low birth weight, and stillbirth[1]. Stillbirth has an acute onset, and is associated with bile acid levels ≥ 40 umol/L causing cardiac arrythmias. Ursodeoxycholic acid (UDCA) is considered the treatment of choice[1-3].

CLINICAL CASE:

Case of a 24-year-old primigravida, who presents ICP symptoms since the 14th WGA, with jaundice and pruritus. She had a previous cholecystectomy at 11 years. Relevant laboratories included hyperbilirubinemia and elevated bile acid levels, that partially improved with UDCA, and Cholestyramine treatment. Antenatal steroids were given, and a multidisciplinary management is given in conjunction with neonatology and psychology services. Induction of labor is decided at 33 WGA due to critical bile acid levels despite maximal therapy. A baby boy was delivered via C Section by failed induction of labor, with an APGAR score of 8-9/10. The newborn was discharged after improvement with phototherapy. The mother's bile acid levels continued elevated 10 days after birth, and she presented signs and symptoms for up to 2 months afterward.

		WEEKS OF GESTATIONAL AGE (WGA)							D16 PUERP.
		17	21	24	27	30	32	33	
LAB REPORTS	AST (U/L)	99	70	80	55	49	83	67	133
	ALT (U/L)	215	140	147	88	76	112	95	159
	ALP (U/L)	355	326	285	321	284	319	308	614
	T. BILI (mg/dL)	2.42	3.18	4.6	3.14	3.62	4.38	4.48	4.04
	TOT BILE ACIDS (umol/L)	67	150.4	68.8	150	85.6	90.1		135

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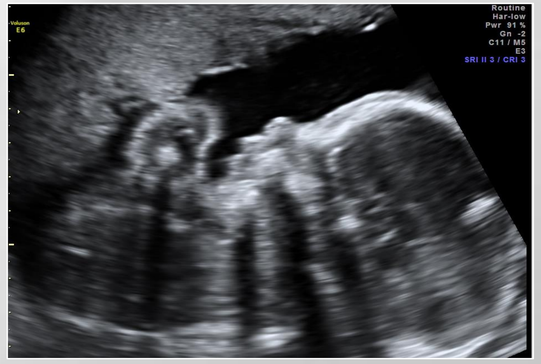
A



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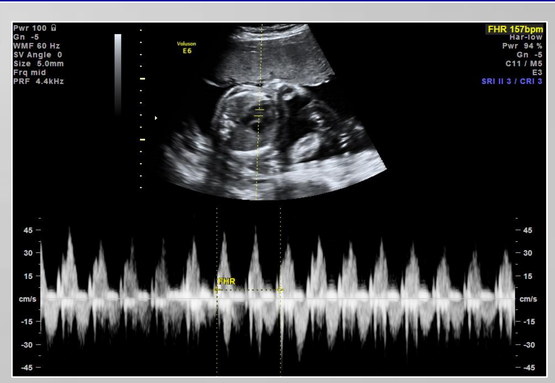

Figure 1. Fetal US at 24 WGA; A:Normal fetal anatomic evaluation. B: Fetal cardiac doppler without alterations.

DISCUSSION:

Our patient presented with ICP symptoms since the early second trimester of pregnancy, with a previous history of cholecystectomy at a very young age, and persistent critically elevated levels of bile acid levels throughout gestation despite treatment, classifying her ICP as a severe one, prompting a preterm delivery at 33 WGA. After giving birth she persisted with altered laboratory findings 2 weeks later, and with resolution of symptoms 2 months afterwards. The patient's clinical presentation and history is highly suggestive of a genetic mutation, but due to low-income resources and not coverage by medical insurance those tests were not performed.

CONCLUSION:

- It is important as primary care physicians to recognize the symptoms and signs of ICP to make an early diagnosis, to be able to provide early treatment, and referral.
- Severe and refractory ICP has an increased risk of stillbirth that may prompt a preterm delivery.
- If elevated bile acid levels and liver enzymes persist after giving birth, other underlying causes should be ruled out. In these cases, it would be advisable to avoid future pregnancies due to the high risk of recurrence (40-70%)[1-3], and to avoid estrogen hormonal contraception due to the risk of presenting intrahepatic cholestasis with estrogen stimulation.

This study was approved by the PHSU IRB, Protocol number 1903008164, on 03/21/2019.