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Oral Contraception Woes: Idiosyncratic Drug Induced Liver Injury

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Oral Contraception Woes: Idiosyncratic Drug Induced Liver Injury Abdul Aleem, MD and She-Yan Wong, MD

BACKGROUND

- Idiosyncratic drug-induced liver injury (DILI) is one of the most common causes of acute liver failure in the United States.
- The clinical manifestations of DILI can range from asymptomatic liver test abnormalities to prolonged jaundice or overt acute liver failure.
- Oral contraceptives (OCCs) are associated with DILI; however modern OCCs have not been known to cause liver transaminase elevations at rates any higher than placebo.
- We report a case of a patient who presents with jaundice and elevated transaminases one week after starting OCCs.

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CASE PRESENTATION

- A 29-year old female of Indian origin presented to her primary care physician's office with complaints of fatigue and pruritus.
- Laboratory workup revealed elevated liver function test results (Table 1).
- History was negative for any coexisting medical disorders, alcohol or illicit drug use.
- Family history was positive for cholestasis of pregnancy in her mother and sister.
- The patient reported taking OCCs (norethin- Her OCCs were discontinued resulting in drone acetate and ethinyl estradiol) one week significant improvement in her symptoms and prior to the onset of her symptoms. complete normalization of her liver function tests (Table 2).

1	TABLE 1: LIVER FUNCTION TESTS ON OCCS						
	Component		Values			Units	
	Total Bilirubin	3	3.6			mg/dl	
	ALP 1		02 92			U/L	
	AST 152		257		U/L		
	ALT 2		37	378		U/L	
2	TABLE 2: TREND OF LIVER FUNCTION TESTS AFTER DISCONTINUING THE OCCS						
	Time	Week 1	Week 2	Week 3	Week 5	Units	
	Total Bilirubin	4.6	5.2	3.2	0.6	mg/dl	
	ALP	104	127	151	71	U/L	
	AST	358	100	63	16	U/L	
	ALT	621	320	140	20	U/L	
Images 1 and 2. Histopathology showing							

Images 1 and 2: Histopathology showing minimal active hepatocellular damage, mild cholestasis and focal minimal portal fibrosis.

- Further evaluation showed a negative serologic workup for chronic liver disease including viral hepatitis and autoimmune disease.
- Imaging was normal.
- She underwent a liver biopsy that showed minimal active hepatocellular damage and mild cholestasis. (Images 1 and 2)
- The patient's symptoms and jaundice were attributed to OCCs.

DISCUSSION

- The pathophysiology of OCCs associated DILI has been related to bile salt transporter mutations and is similar to that of cholestasis of pregnancy.
- Interestingly, this patient's family history was positive for cholestasis of pregnancy.
- Our patient has never been pregnant, but has plans to become pregnant in the future.
- She was advised that she is at increased risk of developing cholestasis of pregnancy.
- Our case report illustrates the importance of obtaining a thorough history as it has the implications of the cause of DILI as well as guidance for the future.

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