Labetalol, a Common Antihypertensive, an Uncommon Cause of Drug-Induced Liver Injury (DILI)

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Introduction

Labetalol is an antihypertensive medication (AHM) commonly used as first line agent for non-severe hypertension in pregnancy.

We present a case of DILI in a young woman transitioned to labetalol while attempting to conceive.

Case Description

A 35-year-old woman with a h/o hypertension, hashimoto's thyroiditis, anxiety, obesity (BMI 34) was admitted to our hospital for abdominal pain, jaundice, pruritus and aminotransferase (LFT) elevations.

She had been admitted previously at an outside facility with nausea, anorexia, and elevated LFTs (ALT 1264, AST 1419, ALP 294, TBili 5) 20 weeks after initiation of labetalol. There was no h/o alcohol abuse or risk factors for hepatitis B/C. Home medications including labetalol were stopped. Imaging studies including MRCP showed no evidence of biliary obstruction. Infectious workup (hepatitis A/B/C/E, CMV, HSV, EBV) and drug/tox screen were negative.

Case Description Contd.

A liver biopsy showed acute hepatocellular injury without eosinophils, steatosis, cholestasis or fibrosis; differentials included DILI and infectious hepatitis. LFTs improved, patient was discharged and labetalol restarted.

LFTs improved, patient was discharged and labetalol restarted. Two weeks later, she presented to our hospital with worsening jaundice. Admission labs: ALT 905, AST 1553, ALP 257, TBili 19.8, INR 1.4 and creatinine 1. On exam, there was no stigmata of chronic liver disease or encephalopathy. Labetalol was discontinued. Infectious, hereditary, metabolic were negative. ANA was positive (1:320) homogenous pattern with mild elevation in IgG. Prednisolone 40 mg daily was started with rapid improvement in LFTs. At 8 week follow up, she was asymptomatic and LFTs were near normal (Tbili 2); prednisolone was tapered.

Discussion

Mild to moderate, transient aminotransferase elevations are noted in up to 8% of patients on labetalol. But they are asymptomatic and resolve even with continuation of the medication. Severe liver injury however is rare and rapid resolution typically ensues after cessation of the drug. However acute liver failure, death and OLT have been reported.

There are isolated case reports and small case series of labetalol induced DILI, mostly in pregnant women. In a case series, 3 out of 11 patients died and 1 of 5 patients who had liver biopsy had chronic active hepatitis. The mechanism of labetalol hepatic injury is believed to be idiosyncratic. Inadvertent rechallenge has been shown to cause recurrence of DILI. We present this case to increase awareness of labetalol induced DILI as it is the most commonly used AHM in pregnant women.

References

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