Do Not Trust the Internet—Acute Liver Failure Secondary to DILI From Online Hormones Versus Stimulant Use in a Transgender Patient

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INTRODUCTION

Approximately half of acute liver failure cases in the United States are from drug-induced liver injury (DILI), a process modulated by the interplay between host, environment, and agent. Here, we present a case of DILI from unsupervised feminizing hormones versus stimulant use.

CASE DESCRIPTION

A 27 year old transgender (M to F) woman with history of anxiety, depression, and attention deficit hyperactivity disorder (ADHD) presented with 3 weeks of jaundice, abdominal discomfort, acholic stools, and memory issues after consuming several drugs purchased from international websites. Due to severe anxiety, she did not seek endocrinology evaluation for hormone guidance, instead ordering estrogen and anti-androgen therapy to transition on her own. She had been on estradiol for 5 years and cyproterone acetate intermittently for 4 years, restarted 9 months prior with N-methyl cyclazodone for ADHD.

All 3 agents were discontinued at the onset of jaundice, but she then began copious water and laxative intake—"to flush the bilirubin out of [her] body"—along with that of milk thistle and delta-8 THC extract. Pertinent labs included AST 485, ALT 668, T. Bili 52.8, AP 140, INR 3, and K of 2.3. Chronic liver disease workup was negative. Biopsy revealed severe hepatocyte dropout with associated marked cholestasis and mixed portal inflammatory cell infiltrate including eosinophils, features consistent with DILI.

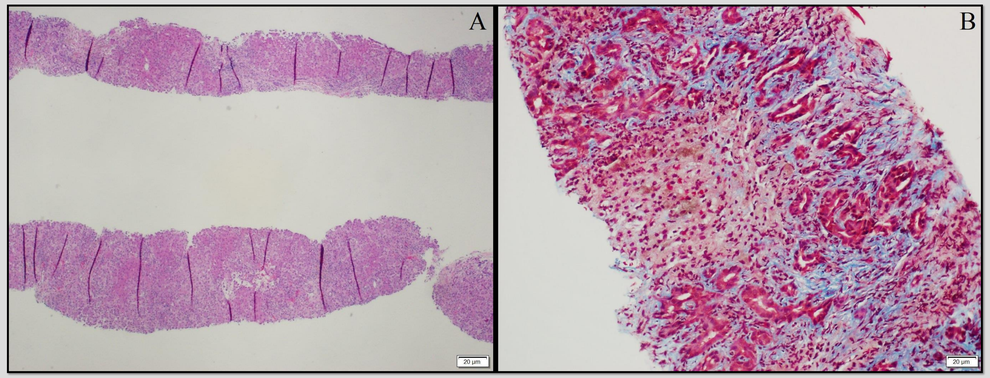

Figure 1: *Patient's histopathology with hematoxylin and eosin* ***(A)*** *as well as trichrome* ***(B)*** *staining demonstrating severe hepatocyte dropout with inflammatory cell infiltrate.*

Hospital course involved hematemesis, spontaneous bacterial peritonitis, Ogilvie's syndrome, acute tubular necrosis requiring continuous renal replacement therapy, paraphimosis, and, ultimately, acute liver failure.

Given severely compromised hepatic function with transplant the only option for viable recovery, the patient was listed as category 1a with a MELD score of 37. She underwent orthotopic liver transplantation complicated by hemorrhage from a vein near the porta hepatis, which was repaired. She was started on tacrolimus, mycophenolate, prednisone, fluconazole, valganciclovir, and bactrim with recommendations to defer hormone replacement therapy for 1 year post-transplant.

DISCUSSION

Those with gender dysphoria may turn to the internet to relieve the distress caused by mismatch between biological sex and gender identity. Unfortunately, the online market is rife with unregulated information and products. In consuming such, physician supervision is imperative, and lack thereof lead our self-medicating patient to incur multiorgan insult, notably dire hepatic dysfunction requiring transplant.