Acute Hepatitis C After Penile Stem Cell Injection

Sahil Zaveri B.S.[2], Ariana Tagliaferri M.D.[1], Gabriel Melki M.D.[1], Polina Aron M.D.[1], Patrick Michael M.D.[1]
[1]St. Joseph's University Medical Center, Paterson NJ
[2]St. George's University Medical School, Grenada

Abstract

Although previous cases have reported the reactivation of chronic HCV after hematopoietic stem cell transplantation, it is uncommon for HCV to present acutely, especially in an immunocompetent patient. Despite literature of reactivated HCV, to our knowledge this is the first case of an acute HCV infection after a penile stem cell injection.

Introduction

Hepatitis C (HCV) is clinically quiescent after transmission however some may be symptomatic. Cases that present within a 6-month window from time of exposure are considered to be acute. Acute HCV can be difficult to distinguish from chronic infection and serum antibodies can take up to 12 weeks to form; however, HCV RNA is the most accurate way to detect acute HCV. Cases are likely underdiagnosed due to the clinical quiescence of the disease in its acute state. HCV is commonly transmitted via blood-borne pathogens and usually manifests as a chronic infection. We present a unique case of acute HCV from a penile stem cell injection.

Although it is known that acute hepatitis C and reactivated hepatitis C is seen in immunocompromised patients and/or from transplant recipients, this is the first presentation of an acute hepatitis C episode in an immunocompetent patient who underwent a penile stem cell injection. A potential vector of transmission is from contaminated needles in the Dominican Republic, as all other risk factors were negative. The genotype was 1a, which is also prevalent among immunocompetent patients in a former study.

Case Presentation

A 58-yo M, no PMH presented with scleral icterus after traveling to the Dominican Republic 3-weeks prior, where he underwent a penile stem cell injection for erectile dysfunction and subsequently experienced nausea, nonbilious emesis, watery diarrhea, chills and general malaise lasting 14 days prior to presentation. VS were remarkable for hypertension (183/104 mm/Hg) and on examination he was jaundiced with diffuse abdominal tenderness without peritonitis. All other risk factors for hepatitis were negative. Labs were significant for mild leukocytosis (8.6 K/uL), abnormal LFT's (ALT 1046 U/L, AST 570 U/L, ALP 163 U/L), conjugated hyperbilirubinemia (total bilirubin 20.8 mg/dL, direct bilirubin 14.3 mg/dL), and elevated prothrombin time (16.3 seconds). He was admitted for suspected hepatitis and was initially treated with NAC-infusion until further testing resulted. PCR testing was negative for EBV, CMV, and HSV 1/2. His autoimmune markers were negative. Hepatitis A total Ab's and anti-Hepatitis C were positive, with HCV RNA qualitative of 8050 IU/mL. The HCV PCR revealed genotype 1a. A portal vein U/S was unremarkable, and a CT abdomen and pelvis with IV contrast revealed non-specific, small hypodensities in the liver lobes. In the GI clinic 2 weeks later, his jaundice had resolved, bilirubin levels had normalized and the patient was entirely asymptomatic. Anti-HCV treatment was initiated.

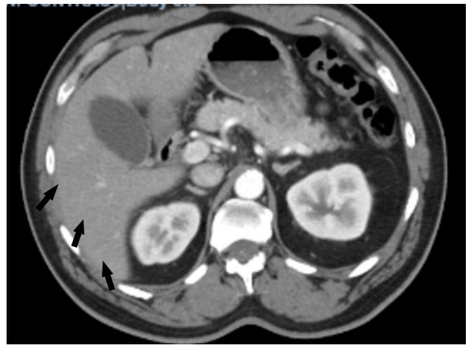

Figure 1. Computerized Tomography of the Abdomen and Pelvis with Intravenous Contrast. Axial view showing numerous non-specific and small hypodensities visualized in the right hepatic lobes (black arrows).

Discussion

Chronic hepatitis can lead to liver cirrhosis, acute liver decompensation and hepatocellular carcinoma. Early treatment and detection of hepatitis C, even in the acute phase can prevent chronic and long-term sequelae. Apart from small hypodensities, the CT and Ultrasound were not indicative of chronic liver disease. Although one may have chronic hepatitis C in the absence of cirrhosis, the lack of laboratory or imaging stigmata of chronic liver disease suggests that this is in fact acute hepatitis C. Current literature shows that the viral load may be lower in acute seroconversions compared to the viral load seen in chronic infections. Our patient's viral load was 8050 IU/mL at time of diagnosis, which further suggests that this is an acute hepatitis C infection.

While there are studies connecting sexual practices, intravenous drug use and blood transfusions as vectors for transmission of hepatic viral illnesses, rarely is the connection made between immunocompetent individuals with penile stem cell injections and the onset of acute hepatitis C. Although it can be difficult to differentiate between acute and chronic hepatitis C, as patients may not be symptomatic and laboratory studies may be ambiguous, clinicians should consider lower HCV RNA as a more sensitive and specific means of diagnosis acute hepatitis C. To prevent long-term complications, early diagnosis and intervention is imperative.

Conclusions

It is essential that clinicians detect HCV in early stages to prevent long-term complications.

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