One Time Hepatitis a Virus Vaccination Might Not Be Enough in Cirrhotic Patients

Ernesto Robalino Gonzaga, MD1, Patricia Guzman Rojas, MD2, Kathlyn Camargo, MD2, Wojciech Blonski, MD3, Minh Ho, DO2.

INTRODUCTION: Acute HAV infection was a highly prevalent infection in the US prior to the development of the vaccine in 1995, after which a drastic decline was observed. Unfortunately, increasing outbreaks have been reported around the world in the last 5 years. In 2016 there was a 44% increase in cases compared to 2015 in the US. Immunoresponse to the HAV vaccine occurs in more than 95% of recipients. However, the increasing number of cases reported is thought to be associated with the immunocompromised population which does not experience a similar rate of seroconversion after vaccination.

CASE DESCRIPTION/METHODS: We present a 54-year-old male with a history of liver cirrhosis who presented to the ED with generalized weakness and jaundice for one week. The patient denied recent travel or drug use, however, admitted to daily alcohol use. His vital signs were normal. Physical exam was unremarkable aside from generalized jaundice. Laboratory results were relevant for markedly elevated transaminases, INR and total bilirubin (Table 1). Ethanol and acetylamphen levels were negative, but viral hepatitis serologies were reactive for HAV IgM and IgG (Table 2), despite prior immunity to HAV two years ago. Supportive treatment was started. His hospital stay was complicated by fulminant liver failure and hepatorenal syndrome. The patient was not a candidate for liver transplant due to continued alcohol use. He pursued hospice care and later expired.

DISCUSSION: Immunity to HAV occurs after exposure to its antigen (Ag) confirmed by a positive IgG. Vaccination should offer lifelong immunity. T-cells play a main role in Ag presentation, cytokine induction and B cell differentiation. However, patients with a compromised immune system often experience T-cell dysfunction, hindering a proper immune response. Immunosuppressed states, such as HIV infection, affect seroconversion rates after vaccination. One study showed 4% of patients with HAV infection were HIV positive and 55% were previously vaccinated. Our patient was negative for HIV but had a history of liver cirrhosis. The liver is the first organ in contact with the HAV Ag, delivered from the gut via the portal vein. Liver macrophages prevent systemic spread of Ag and hepatocytes synthesize complement. Both are essential for a robust immune response. This case highlights the risk of reinfection with HAV in cirrhotic patients, even with prior immunization. We suggest consideration for booster immunization in this population similar to that suggested for HIV patients.

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Seeing Is Believing: Conjunctival Suflusion in a Jaundiced Patient Diagnosed With Leptospirosis

Anas Amrhein, MD, Alexander Nguyen, MD, Amit Patel, MD, Bhair M. Attar, MD, PhD.

INTRODUCTION: The broad differential in the workup of infectious causes of abnormal liver enzymes can be narrowed by a good history and physical. Bilateral Conjunctival suflusion, characterized by non-purulent conjunctivitis, is present in 55% of patients with leptospirosis and is...