

## Hepatitis A/B Vaccine: A Must-Have for Patients With Liver Cirrhosis

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A 70-year-old patient was diagnosed with acute fulminate hepatitis due to hepatitis B virus. He had severe liver failure due to hepatitis B infection. This is a very serious medical disorder with extremely high death rate. With innovative anti-viral treatment, he survived the acute liver failure.

Several questions remain. We are still not sure how he got the infection. All possible pathways to contract the virus based on CDC guidelines were denied by the patient. There are multiple cases of Hepatitis B virus infection among patients with age above 45 and the way of transmission could not be identified. It was not clear why his hepatitis B infection became so severe with liver failure. There are two possibilities: 1. He was infected with very virulent hepatitis B variant; 2. He had already had severe liver disease before he was infected with HBV.

The patient had multiple medical problems including diabetes, severe sleep apnea on CPAP, ischemic heart disease with bypass and stents placement, hyperlipidemia and hypertension. He had elevated liver enzymes in the past 10 years. Abdominal ultrasound and CT of liver showed normal liver repeatedly. He later on had liver biopsy test to evaluate his liver disease, which showed that he had severe Non-alcoholic steatohepatitis (NASH) with stage 2/4 liver cirrhosis. The liver biopsy report helped us understand why he developed severe liver failure because he already had significant liver damage before he was infected with HBV. Unfortunately, his NASH and liver cirrhosis was not diagnosed and most importantly he missed the opportunity to have Hepatitis A/B vaccine which could prevent him from getting HBV infection and liver failure.

Non-alcoholic fatty liver disease (NAFLD) and steatohepatitis (NASH) affect 30% of adult population in USA. The incidence is much higher among patients with diabetes/metabolic syndrome (insulin resistant, obesity, hypertension, hyperlipidemia, sleep apnea and GERD). CDC recommends that all appropriate diabetic patients should receive HBV vaccine if unvaccinated before. All patients with diabetes and metabolic syndrome should be evaluated for NAFLD/NASH and liver cirrhosis. Unfortunately, the importance of this disease is still not well recognized. Abdominal ultrasound and CT very often fail to detect liver cirrhosis especially at early stages.

All patients with NAFLD/NASH and liver cirrhosis should be evaluated for HAV/HBV immune status. People of age above 45 usually do not have HAV/HBV immunization during childhood. Patients without protective HAV/HBV antibody should be vaccinated. If you have any questions about NAFLD/NASH and liver cirrhosis, HBV infection and vaccination, please contact Dr. Jeff Ye, North Atlanta Medical & Digestive Care at 770-346-0900. We can help!