## Uptake of Hepatitis B Vaccine among Hepatitis C Positive Patients and Their Vaccine Response in Myanmar

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Abstract : Background: High-risk groups for hepatitis B infection (HBV) are people who injected drugs (PWID), men who have sex with men (MSM), people living with HIV (PLHIV) and persons with hepatitis C (HCV), etc. HBV/HCV coinfected patients are at increased risk of cirrhosis, hepatic decompensation and hepatocellular carcinoma. To the best of author's knowledge, there is currently no data for hepatitis B vaccine utilization in HCV positive patients and their antibody response. Methodology: From February 2018 to May 2018, consented participants at or above 18 years who came to the clinic in Mandalay were tested with the anti-HCV rapid test. Those who tested HCV positive (n=168) were further tested with hepatitis B profile and asked about their previous hepatitis B vaccination history and risk factors. Results: Out of 168 HCV positive participants, three were excluded for active HBV infections. The remaining 165 were categorized into previously vaccinated 64% (n=106) and unvaccinated 36% (n=59) There were three characteristics groups- PWID monoinfected (n=77), General Population (GP) monoinfected (n=22) and HIV/HCV coinfected participants (n=66). Unvaccinated participants were highest in HIV/HCV, with 68%(n=45) followed by GP (23%, n=5) and PWID (12%, n=9). Among previously vaccinated participants, the highest percentage was PWID (88%, n=68), the second highest was GP (77%, n=17) and lowest in HIV/HCV patients (32%, n=21). 63 participants completed third doses of vaccination (PWID=36, GP=13, HIV/HCV=14). 53% of participants who completed 3 dose of hepatitis B were non-responders (n=34): HIV/HCV (86%, n=12), PWID (44%, n=16), and GP (46%, n=6) Conclusion: Even in the presence of effective and safe hepatitis B vaccine, uptake is low among high risk groups especially PLHIV that needs to be improved. Integration or collaboration of hepatitis B vaccination program, HIV/AIDS and hepatitis C treatment centers is desirable. About half of vaccinated participants were non-responders so that optimal doses, schedule and follow-up testing need to be addressed carefully for those groups.

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