EFFECTIVENESS OF THE NOVEL, ADJUVANTED HEPATITIS B VACCINE AMONG HIV AND HCV PATIENTS

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BACKGROUND

- People living with HIV or chronic hepatitis C virus (HCV) have diminished immune responses to hepatitis B virus (HBV) vaccination.
- The 3-dose HBV vaccine series has a positive response rate upwards of 85%[1] in the general population, but that same series only provides immunity for 20-70%[2] of people living with HIV and 40-60%[3] for the HCV population, emphasizing the need for advancement.
- A new, adjuvanted, 2-dose HBV vaccine series (HepB-CpG) demonstrated an improved immune response (>90%)[1] in non-HIV and non-HCV cohorts, yet the effectiveness in HIV and HCV patients is unknown.
- This study evaluated the immune response to HepB-CpG among HIV and HCV patients at an outpatient virology clinic.

METHODS

- HIV and HCV patients who received at least one dose of HepB-CpG between October 1, 2018 and September 30, 2019 were included for analysis.
- HBV vaccinations were given a minimum of 4 weeks apart and timed with routine clinical appointments. HBV surface antibody was tested at least 4 weeks after last immunization with a result ≥10mIU/mL deemed immune.
- Population characteristics and overall effectiveness were evaluated using descriptive statistics and represented as n(%) or median[IQR] as appropriate.

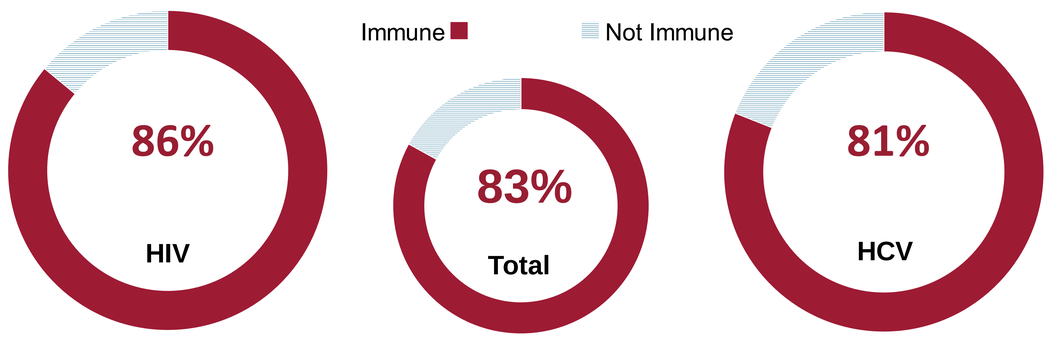
	HIV (n=41)	HCV (n=96)	TOTAL (n=137)
MALE	24 (59)	66 (69)	90 (66)
WHITE	23 (56)	93 (97)	116 (85)
AGE	50 [46-60]	54 [37-60]	53 [38-61]
WEIGHT, kg	81 [71-96]	85 [74-100]	83 [74-100]
DIABETIC	5 (12)	15 (15)	20 (15)
SMOKER	7 (17)	51 (53)	58 (43)
HIV VIRAL LOAD <20	26 (63)	-	26 (63)
ABSOLUTE CD4 COUNT	581 [376-798]	-	581 [376-798]

Novel, **two-dose Hepatitis B vaccine** *confers robust immune response* in **HIV** and **HCV** patients

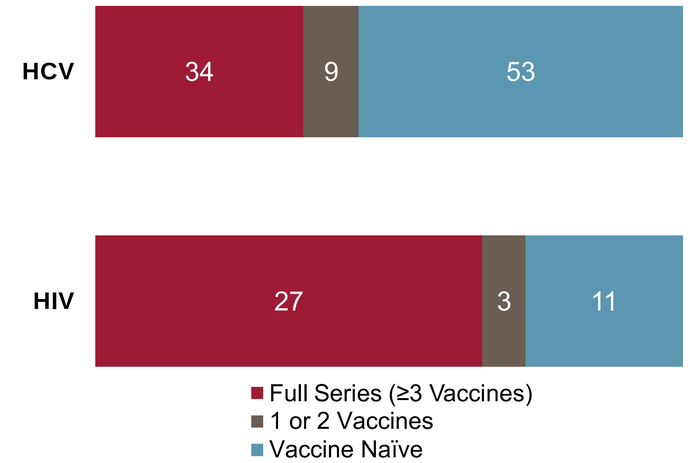
RESULTS

- Currently, 29 (71%) of the HIV cohort have been tested for immunity and 25 (86%) are immune. Another 42 (44%) have been tested in the HCV cohort and 34 (81%) are immune.
- Of the 71 (52%) that were tested for immunity, 16 (23%) were found to be immune after just one dose, and a total positive immune response in 59 (83%).
- Of the 25 immune patients with HIV, 17 (68%) were non-responders to a full, prior HBV vaccination series.
- No adverse events reported. From the HCV cohort 3 patients have died due to unrelated causes.

IMMUNE RESPONSE



NUMBER OF PATIENTS PREVIOUSLY VACCINATED



CONCLUSIONS

- Analysis shows an overall immune response to HepB-CpG of 83% with 52% of the patient population being tested for immunity thus far.
- The immune response is considerably higher than historical data using the three-dose vaccine, and is demonstrating a response in previous non-responders.
- As part of a robust immunization program to protect HIV and HCV patients, HepB-CpG should be considered as an alternative to the traditional HBV vaccination series.
- A larger, prospective study is needed to determine generalizability of results.

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ADDITIONAL KEY INFORMATION

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