Transcript Details
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Hepatitis B Reactivation in HIV: A Recap of Data from IDWeek 2023

Announcer:
You're listening to *Clinician's Roundtable* on ReachMD. On this episode, we'll discuss hepatitis B reactivation in patients with HIV with Dr. Rachel Denyer. Dr. Denyer is an infectious diseases physician, the Infectious Diseases Clinic Director at Washington DC VA Medical Center, and an Assistant Professor at George Washington University. She also presented a session on this exact topic at the 2023 ID Week Conference. The views expressed are Dr. Denyer's own and do not reflect the views and policies of the Department of Veterans Affairs. Let's hear from her now.

Dr. Denyer:
The title of my session is "Hepatitis B Reactivation in Persons with HIV with Positive Hepatitis B Core Antibody after Switching to Antiretroviral Therapy without Hepatitis B Activity." We know that about one in every three people living with HIV has a positive hepatitis B core antibody, and that's much more frequent than in the US population as a whole, where that rate is about 3.5 to 4 percent. Those individuals could either have an isolated positive core antibody or they can have a positive core and surface antibody, but in both of those cases, those are individuals who are at risk for hepatitis B reactivation under certain circumstances. Triggers for hepatitis B reactivation can include things like hepatitis C treatment with direct-acting antivirals, immune suppression, or chemotherapy, but in people living with HIV, there is also spontaneous reactivation that can occur because of immune suppression from HIV/AIDS as well as reactivation that can occur when people stop dually active antiretroviral therapy. That is to say antiretroviral therapy that treats both HIV and hepatitis B.

Antiretroviral therapy without hepatitis B activity, that is to say without tenofovir, emtricitabine, or lamivudine, is increasingly popular and increasingly being used. So prior to 2017, these regimens were really considered to be salvage ART regimens, but in 2017, a single tablet formulation of dolutegravir with rilpivirine was approved, and in 2021, the FDA also approved a single long-acting injectable antiretroviral regimen of cabotegravir with ropivacaine.

And hepatitis B reactivation is known to be a potential risk with these regimens and is mentioned in the FDA label for these products, but the exact frequency with which this occurs is unknown, so we set out to try and establish how frequently hepatitis B reactivation occurs after people switch to one of these regimens for antiretroviral therapy that has no hepatitis B activity.

So in doing this study, we identified a group of 20,941 participants in the Veterans Aging Cohort Study that had a positive core antibody, and we looked just for those that we considered to be at risk of hepatitis B reactivation, so they had to have a negative surface antigen prior to ART switching. If their HPV DNA was checked, it had to be negative on the nearest result before switching and who had switched to antiretroviral therapy that had no hepatitis B activity, so no tenofovir, lamivudine, or emtricitabine, and that gave us an at-risk population of 5,954 individuals. Our primary outcome was hepatitis B reactivation, which we defined as any new surface antigen positivity or any newly detectable hepatitis B DNA. We found that 89 participants had hepatitis B reactivation that occurred after the date of switch, and that's among the 5,954 in our at-risk cohort, giving a rate of 1.5 percent. However, when we took a look at those cases and excluded folks that had restarted on a hepatitis B active ART regimen prior to hepatitis B reactivation and we also excluded cases where people had stopped taking antiretroviral therapy altogether and there were treatment interruptions prior to the hepatitis B reactivation, we actually found 39 confirmed cases of hepatitis B reactivation among those who had continued on their antiretroviral therapy without hepatitis B reactivity prior to reactivation, so that narrower case definition gave us a rate of reactivation of 0.7 percent. And of those 39 cases with hepatitis B reactivation, 32 percent had an ALT level of over 100 at time of reactivation, two participants had missing data for that outcome, and 16 of the 39, which is 41 percent, were actually hospitalized within 30 days before or after hepatitis B reactivation. So this suggests that hepatitis B reactivation was an uncommon finding in this at-risk cohort but did appear to be clinically significant in many of the cases where it occurred.

We also went on to look at the timing of hepatitis B reactivation, and we found that the reactivation occurred at mean of 292 days after regimen switching but with most of the reactivation occurring in the first year after switch but a long tail up to five years from the date of switching, and so the range of time over which reactivation cases occurred was quite large, and the interquartile range was 164 days to 816 days.

And then the third result that I think is interesting from this study is that we did a prespecified subgroup analysis where we looked at prior serology results for hepatitis B, and we found that the rate of reactivation in terms of the confirmed cases and in terms of the broader data set where we looked at all reactivation occurring after the data switch were significantly lower in people who had a positive surface antibody at some point in the past compared to those that had never had a surface antibody that was positive, suggesting that surface antibody may offer some partial protection from reactivation. And remembering that everyone in this at-risk cohort had a negative surface antigen before their ART was switched to a non-hep B-active regimen, we also found that those with a prior surface antigen in the remote past that was positive had higher rates of reactivation than those who had never had a surface antigen that was positive in the past. So the rates of reactivation in those who had a prior surface antigen that was positive in the remote past and who had never had a positive surface antibody were as high as 10.6 percent for all the reactivation occurring after switch and, for our stricter case definitions, 6.1 percent for those who continued on ART without hepatitis B reactivation without hepatitis B activity prior to the time of reactivation, suggesting that we should all be looking very hard for those remote prior positives surface antigens before we consider switching our patients to regimens without hepatitis B activity.

Announcer:
That was Dr. Rachel Denyer giving us an update on her presentation at the 2023 ID Week Conference that focused on hepatitis B in patients with HIV. To access this and other episodes in this series, visit *Clinician's Roundtable* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!