Biktarvy May Be the Best Option for People With Both HIV and Hepatitis B

Once-daily pill suppressed HBV viral load in nearly two thirds of people with HIV/HBV coinfection.

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Two antiretroviral regimens did a good job controlling HIV in people with both HIV and hepatitis B virus (HBV), but the Biktarvy combination pill led to greater HBV suppression, according to a study presented at the 24th International AIDS Conference (AIDS 2022) this week in Montreal.

HIV and HBV are transmitted by similar routes, and many people have both viruses, known as coinfection. Worldwide, around 8% of people living with HIV also have hepatitis B, but this can reach as high as 25% in areas where both viruses are endemic.

“Emerging HIV epidemics in areas of high HBV rates such as Asia are expanding the number of people with HIV/HBV coinfection,” said presenter Anchalee Avihingsanon, MD, PhD, of HIV-NAT and the Thai Red Cross AIDS Research Centre.

Over years or decades, chronic hepatitis B can lead to severe liver disease, including cirrhosis, liver cancer and the need for a liver transplant. People with HIV/HBV coinfection tend to experience more rapid liver disease progression and are at increased risk for serious complications compared to those with hepatitis B alone. On the other hand, a recent study found that people with both HIV and HBV received better care than those with only hepatitis B.

Certain antiretrovirals used to treat HIV—lamivudine, emtricitabine, tenofovir disoproxil fumarate (TDF) and tenofovir alafenamide (TAF)—are also active against HBV. These are components of several widely used antiretroviral combination pills. Treatment guidelines recommend that people with HIV/HBV coinfection should include such dually active drugs in their regimen.

Antiviral treatment suppresses HBV replication, which can reduce liver inflammation and bring liver enzyme levels back to normal. Treatment can sometimes lead to loss of hepatitis B antigens and production of antibodies (seroconversion), but this is less common. Hepatitis B surface antigen (HBsAg) loss is considered a functional cure.

Avihingsanon and colleagues conducted a study comparing Biktarvy (bictegravir/TAF/emtricitabine) versus dolutegravir plus TDF/emtricitabine (Truvada and generic equivalents) for HIV/HBV coinfected people. Bictegravir and dolutegravir are two integrase

inhibitor that are highly effective against HIV. TAF and TDF are the new and old versions of tenofovir; TAF is easier on the kidneys and bones but has been linked to greater weight gain.

The Phase III ALLIANCE trial enrolled 243 participants, mostly in Thailand, China or Malaysia, who had not previously been treated for HIV or hepatitis B. Most were men, about 90% were Asian and the median age was about 32 years. About 80% were hepatitis B “e” antigen positive.

At study entry, they had an HIV RNA viral load of 500 or higher and an HBV DNA viral load of at least 2,000. The median CD4 count was quite low, at approximately 240. Their HIV was not resistant to tenofovir or emtricitabine, and they had adequate kidney function (a criteria for people taking TDF).

The participants were randomly assigned to receive Biktarvy, taken as one pill once daily, or dolutegravir plus TDF/emtricitabine, taken as two pills once daily. The primary endpoint was HIV and HBV viral suppression at 48 weeks, with treatment continuing through 96 weeks.

Both regimens were highly effective at suppressing HIV, as seen in previous studies of people living with HIV alone. At 48 weeks, 95% of people taking Biktarvy and 91% of those taking dolutegravir plus TDF/emtricitabine had an HIV viral load below 50. CD4 cell gains were 200 and 175, respectively.

But HBV suppression was more difficult to achieve: 63% of people taking Biktarvy and 43% of those taking dolutegravir plus TDF/emtricitabine had an HBV viral load below 29 copies. This was a statistically significant difference in favor of Biktarvy.

Biktarvy was also more likely to improve markers associated with a functional cure, though hepatitis B antigen loss and seroconversion were uncommon in both treatment groups.

Among participants who were HBeAg positive at baseline, 26% in the Biktarvy group experienced HBeAg loss at 48 weeks, compared with 14% in the dolutegravir plus TDF/emtricitabine group. HBeAg seroconversion was also higher in the Biktarvy group, 23% versus 11%, respectively. The latter difference was statistically significant at 48 weeks.

Declines in hepatitis B surface antigen were even less common: 13% in the Biktarvy group and 6% in the dolutegravir plus TDF/emtricitabine group achieved HBsAg loss at 48 weeks, and 8% versus 3%, respectively, experienced HBsAg seroconversion. Although the rates of HBsAg loss and seroconversion were numerically higher in the Biktarvy group, these differences did not reach statistical significance at 48 weeks.

People taking Biktarvy were more likely than those in the dolutegravir plus TDF/emtricitabine group to experience ALT liver enzyme normalization (73% versus 55%, respectively), but again the difference was not significant at 48 weeks. Seven and four participants, respectively, experienced ALT flares, bursts of liver inflammation that can be a precursor to HBsAg loss

Treatment was generally safe and well tolerated. The frequency of drug-related adverse events

was similar in the Biktarvy and dolutegravir plus TDF/emtricitabine groups (24% versus 27%, respectively), as were severe laboratory abnormalities (34% versus 31%). Severe drug-related adverse events were rare in both groups (5% and 1%).

The most common drug-related adverse event in both groups was weight gain, reported by 6% and 7%, respectively. This is noteworthy because in prior studies, TAF has been linked to weight gain and TDF to weight loss. Total and LDL cholesterol increases were uncommon but observed more often in the Biktarvy group.

Taken together, the findings show that Biktarvy is a safe and effective initial treatment for people with HIV/HBV coinfection, Avihingsanon said. Biktarvy was noninferior to dolutegravir plus TDF/emtricitabine when it came to HIV suppression. Biktarvy was associated with greater HBV suppression and a higher rate of HBeAg seroconversion, with numerically higher but not significant differences in HBeAg loss, HBsAg loss, HBsAg seroconversion and ALT normalization.

“[HIV/HBV coinfection] is still a very important problem, particularly in Asia, and the clinical course of hepatitis B in people living with HIV is marked by accelerated liver disease progression,” International AIDS Society president-elect Sharon Lewin, MD, of the Peter Doherty Institute for Infection and Immunity in Melbourne said at an AIDS 2022 media briefing. “These are important findings not just for people living with HIV but for hepatitis B management more generally.”

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