Bictegravir and Dolutegravir Tied to Metabolic Side Effects

These two integrase inhibitors are associated with high blood sugar and diabetes.

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The integrase inhbitors bictegravir and dolutegravir are associated with metabolic adverse health events, specifically diabetes and hyperglycemia (elevated blood sugar), NATAP reports.

Bictegravir is included in the Biktarvy single-tablet antiretroviral regimen. Dolutegravir, which is sold as an individual tablet under the brand name Tivicay, is included in the Dovato, Juluca and Triumeq single-tablet combination regimens.

Presenting their findings at the recent virtual IDWeek conference, researchers from Midwestern University Chicago College of Pharmacy analyzed 2007 to 2019 data from the Food and Drug Administration Adverse Event Reporting System (FAERS). This system compiles voluntary reports of adverse events people experience after a drug has been approved by the federal agency.

There were 7,840 reports pertaining to dolutegravir in relation to weight gain or the diagnosis of diabetes or hyperglycemia as well as 5,551 reports for the integrase inhibitor raltegravir (Isentress), 4,034 for the integrase inhibitor elvitegravir (a component of the Genvoya and Stribild combination pills) and 1,414 for bictegravir. Altogether, there were 18,400 such reports for any integrase inhibitor.

After adjusting the data to account for sex, age, the type of reporter to FAERS (such as the person taking an integrase inhibitor or their medical provider) and specific integrase inhibitors, the researchers found that taking any integrase inhibitor was associated with a 2.16-fold increased likelihood of reporting weight gain. Weight gain was a repsective 6.82-fold, 3.29-fold, 1.86-fold and 1.63-fold more more likely with bictegravir, raltegravir, dolutegravir and elvitegravir.

There was a 1.20-fold greater likelihood that people taking any integrase inhibitor would report metabolic adverse events and a respective 1.23-fold and 1.28-fold increased chance that people taking bictegravir and dolutegravir specifically would do so.

Considering the various limitations of the data set, the study authors concluded that as a group, integrase inhibitors are associated with weight gain and that bictegravir and dolutegravir in particular are associated with the metabolic abnormalities hypoglycemia and diabetes. They called

for health care providers to keep these findings in mind when prescribing integrase inhibitors.

For the components of the single-table regimens see poz.com/drug_charts/hiv-medications.

To read the NATAP article, click here.

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