Weight Gain

WHAT IS WEIGHT GAIN?

The prevalence of obesity and overweight among people with HIV is rising globally. It is estimated that up to 40% of people with HIV who where assigned female at birth (AFAB) and 20% of people with HIV who were assigned male at birth (AMAB) are overweight or obese. Obesity has been associated with several co-morbidities such as cardiovascular disease (CVD), diabetes, cancer, and all-cause mortality. Around 40% of deaths in people with HIV are now due to non-infectious causes. Obesity in pregnancy is also associated with adverse pregnancy outcomes.

A normal body weight is classified as a body mass index (BMI) below 25, overweight as between 25-30, and obese as a BMI of 30 or above.

WHAT CAUSES WEIGHT GAIN?

Weight gain has been associated with the integrase inhibitor class of antiretrovirals and with TAF. The updated analysis for the WHO 2019 guidelines found that there was potentially an absolute increase of between 3-5 kg in body weight in individuals receiving antiretroviral medication (ARV) regimens with dolutegravir (Tivicay, Tivicay PD). The weight gain was greatest in regimens containing dolutegravir plus tenofovir AF and lamivudine (Epivir). Weight gain has also been reported with bictegravir and tenofovir alafenamide (TAF)

Since then, multiple treatment naïve and switch studies in well-resourced and resource-limited settings have reported more weight gain in people with HIV taking an integrase inhibitor-containing ARV regimen compared to those taking a non-integrase inhibitor-containing regimen.

WHY DO PEOPLE GAIN WEIGHT?

The reasons for weight gain are unclear. Several explanations have been proposed.

One explanation is that weight gain is a result of immune recovery. Long-term viral infection depletes fat stores. Weight gain may represent a restoration of weight to what it might have been had the person not been living with HIV for a number of years.

Studies show that people with more advanced HIV disease (low CD4 counts, high viral load) gain more weight, as do people who were underweight before starting treatment.

Another theory is that integrase inhibitors might cause weight gain through effects on the hormonal system which governs appetite regulation. Another variant on this theory is the possibility that integrase inhibitors cause changes to fat cells that lead to increased fat storage.

HOW MUCH WEIGHT GAIN IS BEING SEEN?

Several large clinical trials have reported on weight gain after starting treatment:

- The ADVANCE study compared three different drug combinations. People gained between 0.5-6.4 kg over 48 weeks. AFAB people gained more weight than AMAB people, and there were differences in weight gain between drug combinations.
- An analysis of eight large clinical trials found that 17% of participants gained at least 10% in body weight over 1-2 years.
- The same analysis found that, on average, people gained 2 kg during their first 2 years on treatment, much of it in the first year.

WHAT ARE THE CONSEQUENCES OF WEIGHT GAIN?

Weight gain associated with HIV antiretroviral therapy (ART) may increase the risks of diabetes and CVD. People with HIV are at increased risk of CVD compared to the general population. This increased risk is especially pronounced in AFAB people and younger people. Obesity also contributes to the development of non-alcoholic fatty liver disease (NAFLD).

HOW IS WEIGHT GAIN TREATED?

Non-drug treatments: Upon initiating dolutegravir-containing treatment regimens clinicians should highlight the importance of a healthy diet, avoidance of tobacco, and regular exercise in attempt to manage weight.

As the causes of weight gain are unclear, it is uncertain if changing to different ARVs might slow down or reverse weight gain. It is also important to bear in mind that integrase inhibitors are preferred for first-line treatment because they are more reliable in

suppressing viral load, are less likely to cause drug resistance, and have fewer side effects than other ARVs.

More evidence is needed on whether lifestyle changes such as diet and exercise have benefits for people who have gained weight on ART.

Drug treatments: New medicines approved for weight gain may be appropriate for people with HIV. Glucagon-like peptide-1 (GLP-1) receptor agonists (RA) are a class of drugs that have been approved by the FDA to help with weight management in people who are overweight or obese and have other medical complications, such as high blood pressure

THE BOTTOM LINE

Recent studies have reported that 1 in 6 people starting HIV antiretroviral therapy (ART) gain at least 10% in body weight over 1-2 years.

Weight gain is more common in people assigned female at birth (FAB), Black/African American people, and those who were in poorer health before starting treatment.

Weight gain is associated with specific antiretroviral medications (ARVs), including integrase inhibitors and tenofovir alafenamide.

MORE INFORMATION

nam aidsmap: Weight gain and HIV treatment

POZ: Weight Gain and HIV

TheBodyPro: Why Is Weight Gain Occurring Among Some People Who Start HIV Treatment?

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