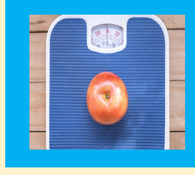
London North West University Healthcare NHS Trust

A review of dolutegravir use and weight gain in a diverse HIV cohort in outer North-West London



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Introduction

Dolutegravir is an integrase inhibitor with a high genetic barrier to resistance, making it a common drug choice for people living with HIV. Dolutegravir is now first-line antiretroviral treatment (ART) in many guidelines, including those published by the British HIV Association (BHIVA). However, clinical trials conducted in African countries, notably ADVANCE and NAMSAL, have shown dolutegravir associated weight gain.

The aim of this review was to assess how many patients within our diverse cohort experienced significant weight increase when started on or switched to dolutegravir.

Methods

The electronic records were searched to identify patients attending one of our hospital sites in 2022 whose ART included dolutegravir. The first 40 patients who had been on dolutegravir for over one year were selected and the following data were collected: demographics, length of diagnosis, viral load, ART, time on dolutegravir, percentage weight change while on dolutegravir, side effects after starting dolutegravir, dietician involvement, annual check list completion.

Results

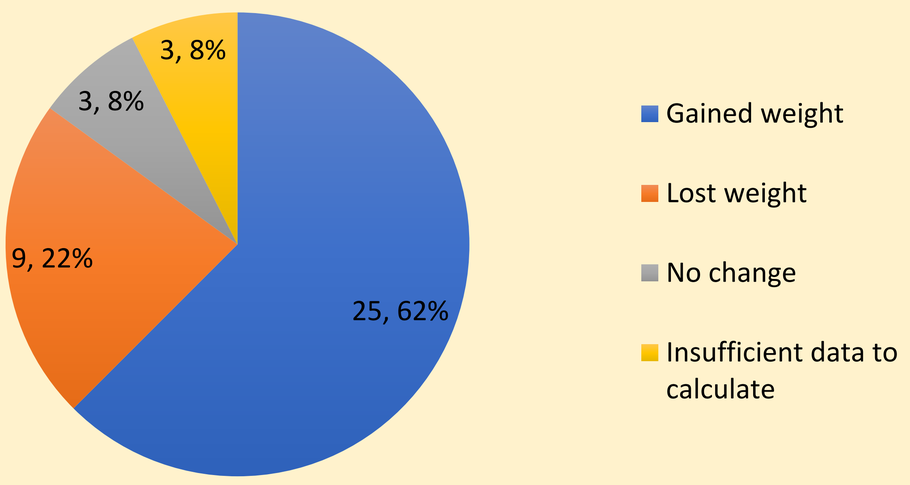
Of the 40 patients included, 19 were female and 21 were male. Ages ranged from 31-80 years. The modal age was 55-64 years, with 20/40 (50%) patients falling into this age bracket.

The most common ethnic origin was black African (18/40, 45%), followed by black Caribbean, white British and Indian. 22/40 (55%) patients had been living with HIV for over 10 years.

The average time on dolutegravir was 36 months (range 12-77 months). The most common ART combination (17/40, 43%) was dolutegravir, abacavir and lamivudine.

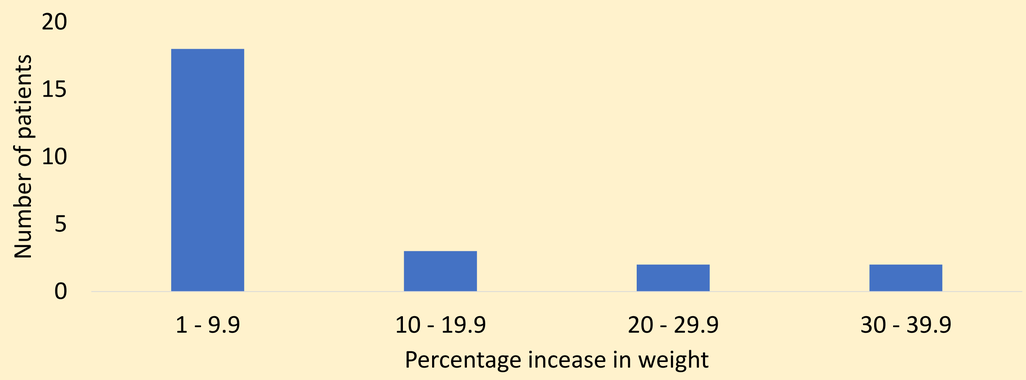
Among the patient cohort, there was evidence of weight loss, weight gain and unchanged weight while on dolutegravir. In some patients there was insufficient data recorded for calculations to be made. Weight changes are summarised in figure 1.

Figure 1: Weight change while on dolutegravir
n = 40



Of those 25 patients who showed an increase in weight, the average percentage increase was 9%, ranging from 1% to 36%. Further detail is shown in figure 2.

Figure 2: Patients gaining weight on dolutegravir
n = 25



When reviewing the most recent annual checklist completed, an offer of dietetics was documented in 5/40 (13%) cases.

At the most recent clinic appointment, there were comments around diet in 9/40 (22%) proformas (for example, ‘reports a healthy diet’), and comments regarding exercise in 3/40 (8%) proformas (for example, ‘going to the gym’).

6/40 (15%) patients had seen the dietician since starting dolutegravir. Their weight gain was well managed including the provision of dietary and exercise advice and re-referral to the HIV team to review medication where appropriate.

In one patient the weight gain was attributed to the insertion of a subdermal contraceptive implant, and this was subsequently removed.

None of the patients appeared to have developed metabolic syndrome due to the weight gained.
3/40 patients (8%) initially experienced neuropsychiatric adverse effects after starting dolutegravir, including headache and insomnia.

Conclusions

Overall, there was a 9% increase in weight among those patients who gained weight while on dolutegravir.

Patients who were seen by the dietician were well managed. However, there was little documentation of referrals to dietetics having been offered, and only a small number of patients had seen the dietician since starting dolutegravir.

This review highlights the findings of trials conducted in Africa. After taking lifestyle changes and diet into consideration, weight gain was clearly seen in some patients commencing dolutegravir. Dolutegravir is often the only option for patients in our cohort with dual and triple class drug resistance. From our review, its use requires close monitoring in those gaining weight. There is also need for rigorous recording and documentation of weight in all patients, and for increased use of routine clinic appointments to discuss diet and exercise, involving the dietetics team early.