

Is treatment emergent weight gain on dolutegravir-based antiretroviral therapy reversible following discontinuation? - a retrospective cohort study

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Introduction

Weight gain following initiation of antiretroviral therapy (ART) is well described, particularly as part of “return-to-health”, however specific associations between weight gain and dolutegravir (DTG) have been reported. We evaluated weight changes following DTG therapy discontinuation amongst a cohort of adults living with HIV at one London centre.

Methodology

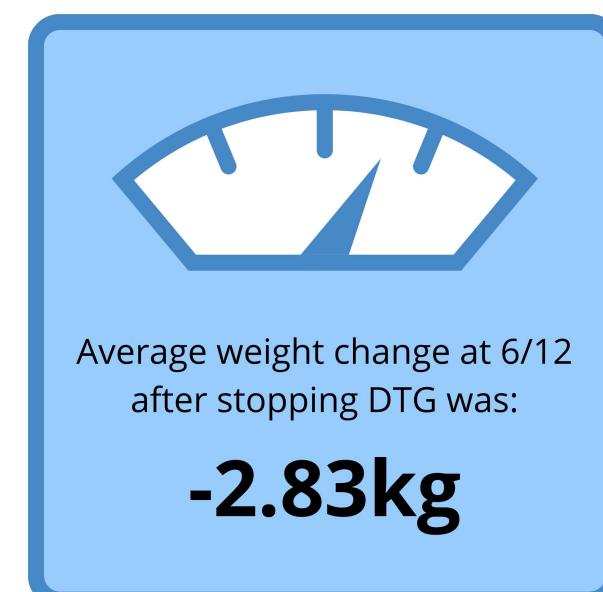
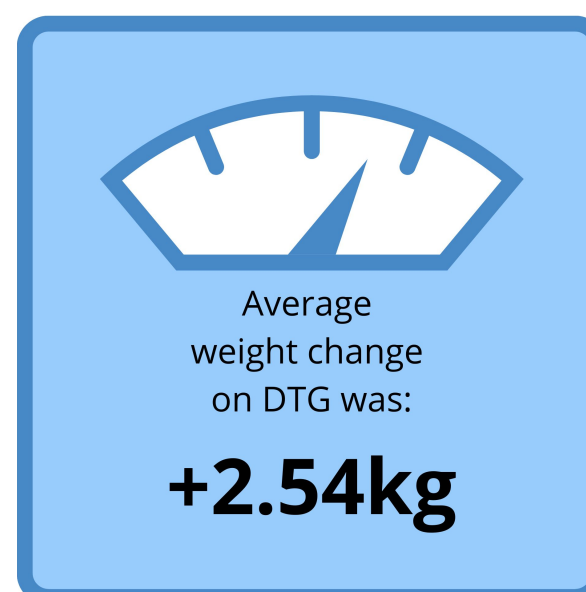
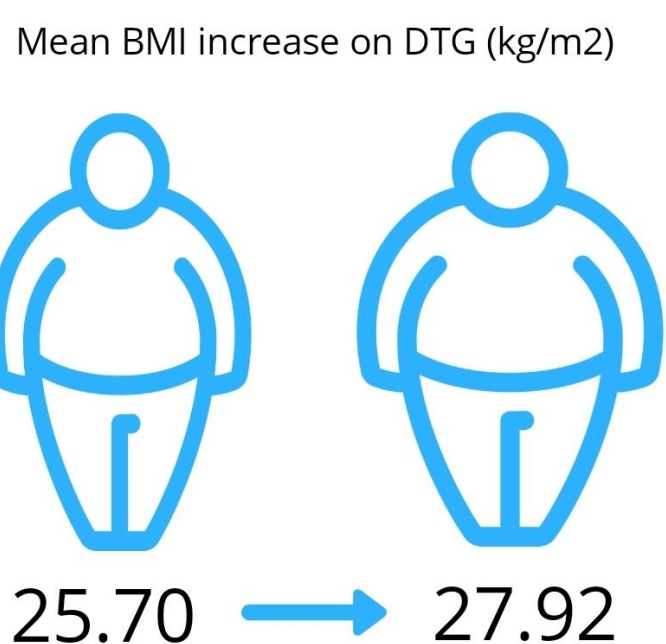
Study design is a retrospective cohort study undertaken between November 2015 and December 2019. Eligible participants were on DTG ≥4 months and switched to a non-DTG regimen with 6-month minimum follow-up post-switch. We collected data on age, ethnicity, gender, CD4 count at time of DTG start, reason for discontinuation, NRTI backbone, weight/BMI prior to DTG start, at time of switch, and at 6 months post-switch. Statistical analysis was descriptive, a comparison was made between those who gained significant weight and those who didn't using Fisher's exact test.

	No significant weight gain (n=21)	Significant weight gain (N=25)	
Female	7	15	P=0.085
Black ethnicity	5	14	P=0.038
CD4 <200	1	5	p=0.198

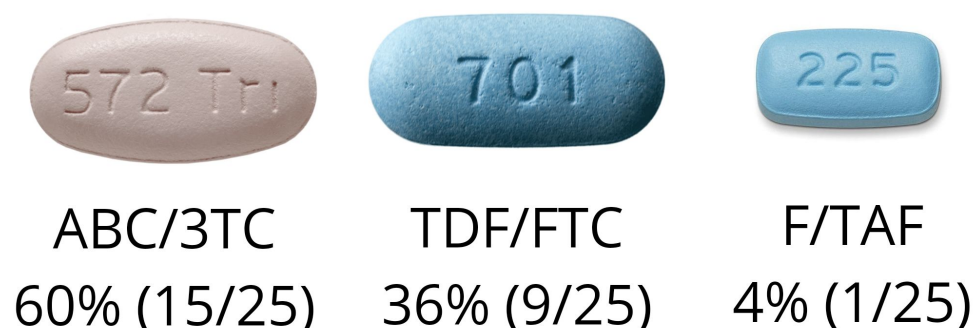
Following DTG discontinuation amongst those who gained significant weight on DTG, we had follow-up data at 6 months on 19/25. 74% (14/19) lost weight. The average weight change at 6 months following discontinuation was -2.83kg (IQR -0.05, -6.05).

Results

A total of 65 patients met our inclusion criteria, mean age was 45, mean CD4 count was 608 and mean time on DTG was 506 days. Data is available on weight for 46/65; of these 78% (36/46) gained weight during therapy.



54% (25/46) gained significant weight (>2kg). The NRTI backbone in this group is as follows:



Conclusion

In this small UK cohort, we have identified risk factors for weight gain on DTG. Discontinuation of DTG amongst individuals who gained weight on treatment was associated with weight loss by 6 months after switch in 74% of individuals demonstrating reversibility in the majority of cases.

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