The Durability of Bictegravir/Tenofovir Alafenamide/Emtricitabine Single Tablet Combination in HIV Patients with M184V Mutation

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Background

The central tenet of HIV antiretroviral therapy(ART) is the enduring efficacy of triple therapy with two nucleot(s)ide reverse transcriptase inhibitor (NRTI) backbone plus either; a non-nucleotide reverse transcriptase inhibitor(NNRTI), a protease inhibitor(PI) or an integrase strand transfer inhibitor(INSTI) to achieve sustained viral suppression.[1] In recent times, dual therapy treatment strategies have been shown to be effective in treatment naïve patients, and for switch of therapy to achieve/maintain viral suppression[2,3]. The aim of this study is to explore the efficacy of the single tablet regimen containing bictegravir(BIC)/tenofovir alafenamide(TAF)/emtricitabine(FTC) in maintaining viral suppression in patients who have a virus with an M184V mutation which confers resistance to lamivudine (3TC) and FTC.

Methods

We conducted an observational, retrospective single centre analysis on patients commenced on BIC/TAF/FTC between January 2019 and January 2021. Patient characteristics including age, sex, viral resistance genotype and reason for ART switch were collected. HIV viral load(VL) was noted at the commencement of BIC/TAF/FTC and at 3,6, and 12 months when available for each patient with an M184V mutation. Data was anonymised and collected on Microsoft Excel® 2019. The analysis is descriptive.

Results

In total 517 patients were commenced on BIC/TAF/FTC during this period. 256 patients have a documented resistance testing profile. 25 of whom have a documented M184V mutation.(Fig. 1) Of these 25 patients 17(68%) were male with a median age of 53 (range 38-68). Avoidance of drug-drug interactions and simplification of therapy were the main reasons for ART switch. All patients were established on ART at the time of switch, 19(76%) of whom were virally suppressed. Of the six(24%) of patients that were not suppressed at switch, the median VL was 299 copies/ml (range 84-4843 copies/ml), five(83.3%) achieved suppression at six months. Overall viral suppression was proven in 22(84.6%) at 3 months, 16(64%) at 6 months, and 14(56%) at 1 year. Viral escape was seen in 3(12%) patients at 1 year, all of whom had been suppressed at 6 months and have documented difficulties with compliance to ART. (Fig. 2)

Fig. 1

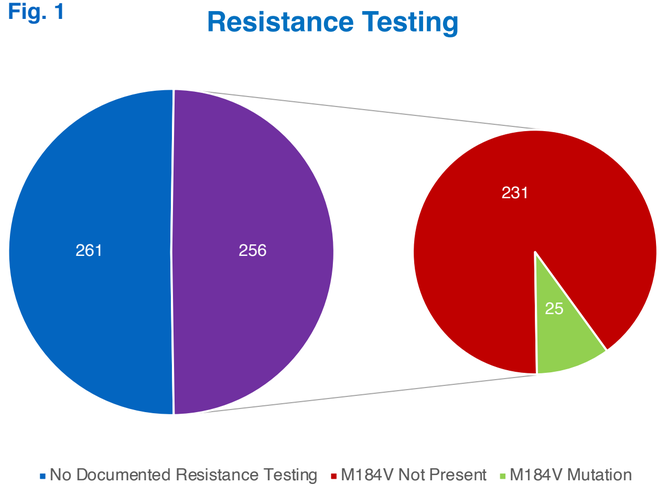
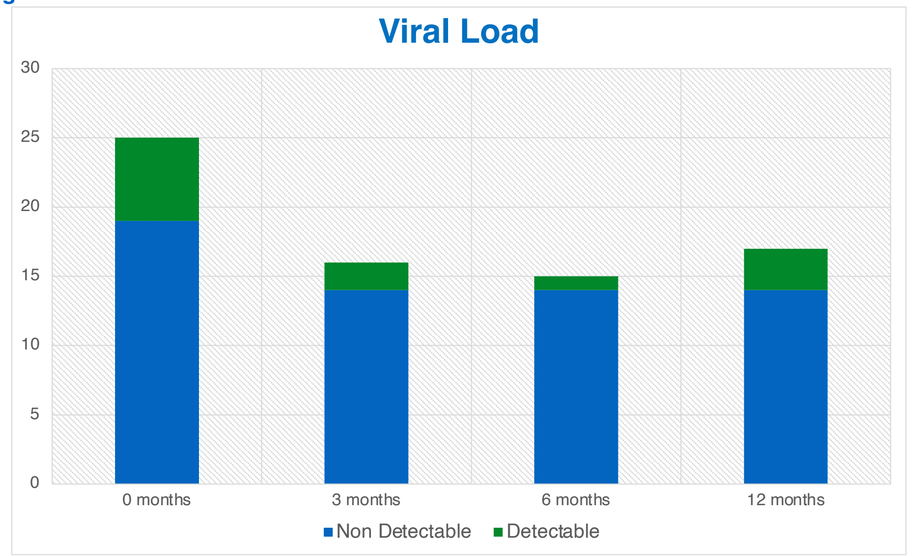


Fig. 2



Conclusion

In conclusion BIC/TAF/FTC appears to be efficacious in maintaining viral suppression and achieving viral suppression in those with suppressed or unsuppressed HIV virus at time of its commencement in patients with an M184V mutation. The study is limited by its small sample size .

References

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