

PRESCRIPTION ANALYSIS OF TENOFOVIR DISOPROXIL FUMARATE AND TENOFOVIR ALAFENAMIDE FUMARATE IN A THIRD LEVEL HOSPITAL

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Background and importance: Tenofovir alafenamide (TAF) is a novel tenofovir prodrug, recently entered the market for HIV infections. Tenofovir alafenamide results in higher intracellular concentrations of the active metabolite tenofovir-diphosphate compared with tenofovir disoproxil fumarate (TDF), allowing for much lower doses of TAF versus TDF. This leads to a reduction in the risk of kidney and bone disease, while maintaining the same efficacy.

Aim and objectives: The aim of this study is to evaluate the prescriptive trend of drugs containing TDF and TAF for HIV in the hospital and the switches from one formulation to the other.

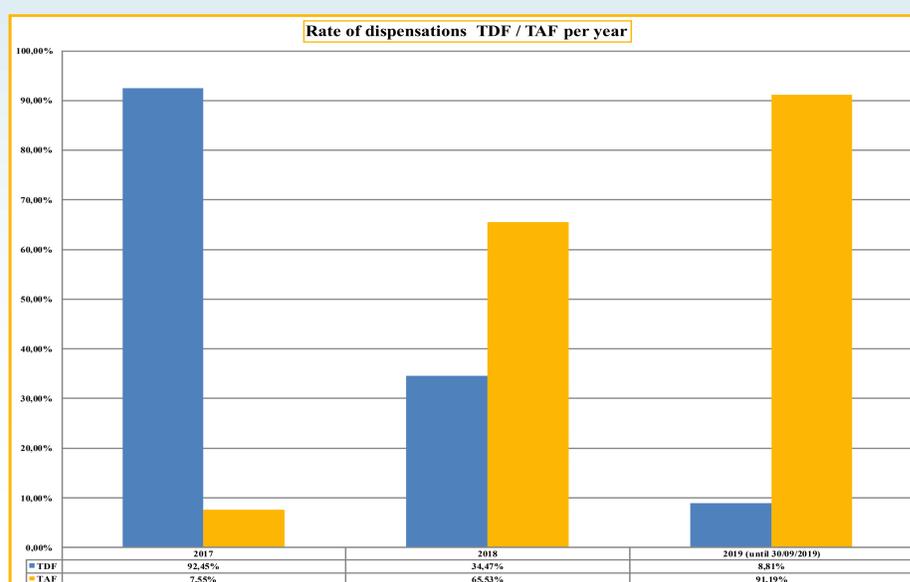
Materials and methods: Dispensations, carried out from 01/01/2017 to 30/09/2019 of formulations containing TDF and TAF, were extracted. In addition, the patients' switches from TDF +emtricitabine +elvitegravir +cobicistat (TDF/EMT/ELV/COB) to TAF +emtricitabine +elvitegravir +cobicistat (TAF/EMT/ELV/COB) and from TDF +emtricitabine +rilpivirine (TDF/EMT/RIL) to TAF +emtricitabine +rilpivirine (TAF/EMT/RIL) were analysed. The data collected was divided by year.

Results: In 2017, 286 patients used TDF in their treatment regimen for HIV, while 62 used TAF-based drugs, the percentage of prescriptions was 92.5% vs 7.5% respectively. In 2018 the patients treated with TDF were 136 and 223 with TAF, the percentage of prescriptions was 34.5% vs 65.5%. In 2019, 44 patients used TDF and 267 TAF, the percentage of prescriptions was 9% vs 91%.

39% (11/28) of patients changed from TDF/EMT/ELV/COB to TAF/EMT/ELV/COB in 2017, 41% (7/17) in 2018 and 50% (2/4) in 2019.

67% (35/52) switched from TDF/EMT/RIL to TAF/EMT/RIL in 2018 and 58% (7/12) in 2019.

No patient changed from TAF/EMT/ELV/COB or TAF/EMT/RIL to the corresponding TDF-based drugs in the three-year period studied.



Conclusion and relevance: It is evident that the reduced toxicity of TAF has resulted in a progressive reduction of the use of TDF over time and a further reduction in the future is conceivable. Therefore it will be important to determine in future works whether patients receiving TDF therapy belong only to specific cases such as: subjects in therapy for pre-exposure prophylaxis, subjects in pregnancy (data on the use of TAF in this category of patients are still limited) and subjects with hypercholesterolemia or hypertriglyceridemia (TDF has been shown to improve the lipid profile).

