UNIVERSITI TEKNOLOGI MARA

EFFECTIVENESS OF TENOFOVIR/EMTRICITABINE VERSUS ZIDOVUDINE/LAMIVUDINE IN COMBINATION WITH EFAVIRENZ IN ANTIRETROVIRAL-NAÏVE HIV-INFECTED PATIENTS

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Dissertation submitted in partial fulfilment of the requirements for the degree of
Master in Clinical Pharmacy

Faculty of Pharmacy

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CONFIRMATION BY PANEL OF EXAMINERS

I certify that a panel of examiners has met on 15th January 2015 to conduct the final examination of Siti Mahanim bt Shaik Ismail on her Master of Clinical Pharmacy dissertation entitled "Effectiveness Of Tenofovir/Emtricitabine Versus Zidovudine/Lamivudine in Combination with Efavirenz in Antiretroviral-Naïve HIV-Infected Patients" in accordance3 with Universiti Teknologi MARA Act 1976 (Akta 173). The Panel of Ecaminers recommends that the student be awarded the relevant degree. The Panel of Examiners was as follows:

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AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledge as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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ABSTRACT

Durable suppression of replication of the human immunodeficiency virus (HIV) depends on the use of potent, well-tolerated antiretroviral regimens to which patients can easily adhere. Combination of two NRTIs and one NNRTI is the best first line regimen in treating retroviral disease (RVD) as compared to combinations of other groups. Tenofovir and Zidovudine are the two drugs that mostly use as one of NNRTIs in combination with either Lamivudine or Emtricitabine. Review of previous literature had shown that there were conflicting data on the superiority of either regime based on virologic and immunologic response. A local, retrospective observational cohort study was conducted to evaluate the virological response (primary endpoint), immunological response and the safety profile between TDF and AZT regimens. A total of 154 ART-naïve samples from HTAR and HSB were recruited. No statistically significant differences were observed in HIV RNA suppression at 24 weeks and 48 weeks ($p = 0.407$ and $p = 0.521$, respectively). Mean difference in CD4 increments were also not significant ($p = 0.54$, 95% CI -59.97, 31.83 at week 24; $p = 0.68$, 95% CI -51.41, 33.59 at week 48). However, AZT was found with more adverse events that leads to discontinuation (p-value <0.001). There were two cases of virological failure in TDF group but the association was not significant ($p = 0.497$). Only education level was identified as predictor of therapy effectiveness. Although there was no significant difference in virological and immunological responses, TDF still has advantage over AZT because of its better safety profile.

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