ETRAVIRINE SUSCEPTIBILITY AMONG PATIENTS FAILING ARV THERAPY IN SÃO PAULO, BRAZIL.

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Background: Etravirine is new a antiretroviral drug, a second generation of Non Nucleoside Reverse Transcriptase Inhibitor (NNRTI) with a higher genetic barrier and active against NNRTI-resistant HIV strains. Objective: To analyze susceptibility of Etravirine in patients failing antiretroviral therapy. Materials e Methods: Sequences from patients HIV collected from 2005-2008 were categorized according NNRTI exposure. Clinical data, resistance mutations and drug susceptibility (Stanford Database=Sensible, Potential Low, Low level, Intermediate and High) were analyzed using EpiInfo.Results: Partial pol sequences from 1157 patients, mean age, sex, VL, TCD4 and time on treatment (TT) were respectively: 35 yo (1-77); 58% male; 4.52 $\log_{10}$, 319 cells/mm³; 7 yo. G-I (n=301), no documented Nevirapine and Efavirenz exposition, G-II (n=515), Efavirenz exposed; G-III (n=207) exposed to Nevirapine, and G-IV (n=134), exposed to both NNRTI. In G-III and G-IV 20% of patients were susceptible to Etravirine. Children of G-III showed highest Etravirine resistance (Intermediate+High) as compared to G-II children with a similar TT (66%x39%,p<0.035), this difference was not observed among adults. Among patients using either Efavirenz or Nevirapine at genotype collection only 6.2% showed full susceptible to Etravirine. The mutations Y181C (p<0.001) and G190A (p<0.001) were significantly associated to Nevirapine exposure. However, L100I (p<0.001), K101P (p<0.013) and K101E (p<0.07) are significantly associated to Efavirenz. Conclusion: Different patterns of mutations were associated to resistance to Etravirine in this study. The number of Etravirine resistance mutation was greater among patients exposed to Nevirapine. L100I e K101P are significantly associated to Efavirenz exposure; Y181C and G190 significantly associated to Nevirapine. Children exposed to Nevirapine shows a significantly higher Etravirine resistance as compared to those exposed to Efavirenz. The use of NNRTI at genotype collection has a major impact on Etravirine susceptibility. Strategies to minimize the time of NNRTI exposure in failure regimens is an important tool to improve HIV salvage therapy considering the new drugs available.