

Virological Evaluation in Hiv1-Infected Children and Adolescents on Second-Line Antiretroviral Therapy in Senegal

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Abstract

Introduction: Data on HIV1 resistance in pediatrics have shown a high prevalence of first-line virological failure. This therapeutic failure has led to second-line treatment. The scarcity of pediatric formulations, inadequate dosing for certain ARVs and certain age groups, could contribute to sub-optimal plasma drug concentrations. This population often has problems adhering to ART. And all these factors favor rapid emergence of resistance. *Material and Methods:* 85 children and adolescents followed for at least 12 months, in 3 health structures in Dakar, were pre-selected; for whom we had to have informed consent afterwards. 2 whole blood tubes on EDTA were collected, for determination of plasma CV and genotyping and sequencing tests as required. *Results:* We sampled 56 of the pre-screened (34 boys and 22 girls): 14 with a CV greater than 1000 copies/ml, 42 with a CV below 1000 copies/ml. We had 3 types of genotype in those who had failed therapy (CRF02_AG, B and C); nd for their sequencing, TAM's mutations were around 70%. *Conclusion:* Thanks to this study, we have data with better knowledge of the virological status of children and adolescents in second-line treatment, and an improvement in their management. The scientific basis is now available, and will help health authorities to guide recommendations on the availability of third-line drugs for this population.

Keywords

HIV1, Resistance, Second-Line Antiretroviral Treatment, Children