Genotypic resistance following virologic failure among children receiving lopinavir/ritonavir (LPV/r)

A total of 24 genotype assays were performed in 18 children who experienced virologic failure while receiving LPV/r-based therapy. The decision to perform an HIV genotype test was made by the treating physicians based on clinical information, such as persistent virologic failure while receiving antiretroviral therapy (ARV). All genotype tests were performed at Instituto Conmemorativo Gorgas de Estudios de Salud using the Siemens’ TRUGENE® HIV-1 Genotyping Assay run on the OpenGene® DNA System. Most (14/18, 77.8 %) genotypes were performed following more than one virologic failure, with a median of 5.5 failures prior to genotyping. The median time from last virologic failure to genotype testing was 100.5 days (IQR 46.3-163). Genotype results showed that 8 (44.4%) children had no clinically significant mutations, 10 (55.6 %) had the 184V mutation, 3 (16.7%) had non-nucleoside reverse transcriptase inhibitor (NNRTI) mutations. Only 3 (16.7%) had protease inhibitor mutations that would affect sensitivity to LPV/r, and only 1 (5.6%) patient had significant thymidine analog mutations (TAMS). Only one child had been exposed to Prevention of Mother-to-Child Transmission (PMCT) therapy (zidovudine) and he did not have any mutations.