

HIV drug resistance after failure of 6 month first-line therapy in a hospital: a case series

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Abstrak

This is the first report of HIV drug resistance in RSUPN Dr. Cipto Mangunkusumo. We tested We reviewed eleven new cases of HIV patients who had virologic failure after 6 months first-line antiretroviral therapy. With the sequencing method, analysis of gene mutations encoded HIV drug resistance. Genotypic resistance results and HIV-1 subtype were interpreted by Stanford DR database. Of ten plasma samples that were successfully amplified and sequenced, all samples were resistant to at least one antiretroviral drug. Genotypic resistance towards the antiretroviral drugs being used was observed in lamivudine (90%), tenofovir (83%), nevirapine (100%) dan efavirenz (100%). It is interesting that no zidovudine resistance were found, including in four patients receiving zidovudine in their HAART. The common NRTI mutations were M184VI and K65R, while NNRTI mutations were Y181CFGVY, K103N, A98AG, E138GQ and G190AGS. No mayor PI mutations were found. Based on these findings, we supports the need for appropriate virology monitoring and HIV drug resistance survey in clinical practice and access to drug options in case of virology failure.

.....Laporan ini merupakan laporan pertama mengenai kejadian resistensi obat HIV di RSUPN Dr. Cipto Mangunkusumo. Kami melakukan uji deteksi resistensi obat HIV pada 11 pasien HIV kasus baru yang mengalami gagal virologi setelah dilakukan pengobatan antiretrovirus lini pertama selama 6 bulan. Dengan metode sekuensing, dilakukan analisis mutasi gen penyandi resistensi obat HIV. Subtipe HIV-1 serta hasil uji resistensi secara genotip diinterpretasi menggunakan database Stanford DR. Dari sepuluh sampel plasma yang berhasil diamplifikasi dan disekuensing, ditemukan resistensi secara genotipik. Berdasarkan rejimen antiretrovirus yang diterima, ditemukan manifestasi resisten terhadap rejimen lamivudine (90%), tenofovir (83%), nevirapine (100%) dan efavirenz (100%). Menarik untuk diperhatikan bahwa tidak ditemukan manifestasi resistensi terhadap zidovudine, termasuk pada empat pasien HIV/AIDS yang mendapatkan zidovudine dalam rejimen terapinya. Mutasi NRTI yang banyak ditemukan adalah M184VI dan K65R, sedangkan mutasi NNRTI adalah Y181CFGVY, K103N, A98AG, E138GQ dan G190AGS. Tidak ditemukan mutasi mayor terhadap PI. Berdasarkan temua tersebut, memperkuat urgensi monitoring virologi, survey resistensi obat HIV serta akses pilihan terapi yang sesuai pada kasus gagal terapi.