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Poster presentation

Virological failure and predictors in patients with clinical and immunological failures to first-line ARV regimens in Vietnam

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Purpose of the study

In Vietnam, treatment failure to first-line ART, and the decision to switch patients to second-line ART, is usually made on the basis of clinical and immunological criteria because viral load (VL) testing has just been performed since June 2007. However, many studies have shown that these criteria have very low sensitivity and specificity. We estimated the rate of virological failure (VF), and predictors in HIV patients with clinical and/or immunological failure to first-line regimens in Ho Chi Minh City.

Methods

Between June and December 2007, VL testing was completed on 248 patients with MOH clinical (new WHO stage 3 or 4 condition) or immunological criteria (CD4 fall to below pre-treatment value or <50% of highest on-treatment value), additional WHO criteria (CD4<100 after 12 months on ART), or history of previous suboptimal ARV regimens (mono- or dual-therapy or inadequate doses). Viral load testing was done at Pasteur Institute (RT-PCR Promega, DTCS Beckman Coulter).

Summary of results

177 patients (71.4%) were male. Median age was 27 years (IQR: 9–32). Twenty-four (9.7%) had clinical failure, 205 (82.7%) with immunological criteria, 41 (16.5%) with previous suboptimal treatment. Eighty-seven (35.8%) patients had previous ART. Median duration of ART was 14.5 months (IQR: 11–17). Median baseline CD4 was low (53 cells/ml; 20–126). Median CD4 change after 12 months was 35 (-12–86). Most of patients were on first-line regimens: 82 (33.2%) on D4T+3TC+NVP, 75 (30.4%) on D4T+3TC+EFV, 26 (10.5%) on AZT+3TC+NVP, and 21(8.5%) on AZT+3TC+EFV.

Overall, the rate of VF was 58.5%, highest in patients with both previous suboptimal treatment and immunological failure (91%), and lower in those with only previous suboptimal treatment (80%). Only clinical or immunological failures had lowest rates of VF (57.1% and 57.0%). Virological failure was independently associated with age > 25 years(OR: 7.1, 95% CI: 2.6–19.3), male (4.3;1.7–10.4), CD4 > 50 (1.7; 0.8–3.6), history of pre-ART (4.0; 1.8–8.9), duration of ART > 12 months (4.2; 1.7–10.1), and CD4 increase <50 after 12 months of treatment (4.7; 2.2–10.1).

Conclusion

Immunological and clinical failures predicted VF in only 57% and may lead to unnecessary ART change in 41.5% of patients. VL testing should be done to assess response of ARV treatment. Moreover, patients with virological suppression on first-line ARV also benefit by prolonging the use of first-line drugs and thereby preserving future treatment options.