Virological Outcomes in HIV Infected Patients with Suspected Treatment Failure Based on Clinical or Immunological Criteria in Oshakati, Namibia

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Abstract:

Background and Implementation Approach:

Namibia has a population of about 2 million and in 2008 had an estimated HIV antenatal prevalence of 17.8%. The Antiretroviral Therapy (ART) Program was launched in 2003. the Oshakati Communicable Disease Clinic, located in the north, is the largest public ART centre with 6118 patients on ART, 14% of the national total. ART care is provided by a team trained in HIV management. Viral Load (VL) testing was introduced in 2006 and performed on clinical and/or immunological suspicion of ART failure. We report the virological outcomes in patients with suspected failure based on clinical and/or immunological criteria.

Analysis Design and Methods:

Laboratory registers were used to find charts of all patients who were alive and on ART between January 2003 and August 2007 and who had VL done on suspicion of ART failure. Criteria for suspected ART failure were, in children, a drop of ≥ 5% in CD4% from peak and in adults, a ≥30% CD4 count drop from peak, development of new opportunistic infections (OIs) or weight loss of ≥ 10% after an initial response to at least 6 months of treatment. Demographics, body weight, OIs, level of adherence to ART, CD4 count and %, and VL results were analyzed.

Results:

Of 4246 patients alive and on ART, 268(6%) had VL done on suspicion of ART failure. Of these, 217(81%) had VL results available in the system. There were 130(60%) adult females and 35(16%) children (<14 years). Mean age was 35(14-66) years in adults and 7.5 (10 months-13) years in children. The mean time on HAART was 27 (6-56) months in adults and 31 (14-53) in children. All patients were on their first HAART regimen; the most common regimens were [stavudine or zidovudine] plus lamivudine plus [nevirapine or efavirenz] (92%). Commonest OIs were tuberculosis (12%), pneumonia (7%), oral candidiasis (6%) and gastroenteritis (1%). Mean CD4 count in adults was 114 (3-357) cells/mm³ (n=209) at baseline, 473 (129-1552) (n=206) at peak and 313 (32-852) (n=209) when VL was collected. Mean CD4 cells % in children was 12 (2-17) (n=12) at baseline, 31(10-45) (n=8) at peak and 26 (5-45) (n=26) when VL was collected. Mean weight increased by 50% from baseline before falling from peak in 9% in children. Adherence was good (>95% of pills taken) in 89 % of patients. VL was <400 copies/ml in 172 (79%) of patients including 16(46%) children and 156(86%) adults, while 21% of subjects had VL > 400 copies/ml. Following receipt of VL results, ART second line was started in 8 (23%) children and 14(8%) adults.

Conclusions and Recommendations:

Use of clinical and/or immunological criteria alone for defining and diagnosing treatment failure did not correlate with VL findings and may result in premature switching to second-line HAART regimens in this population. Making VL monitoring available to all patients on ART may better preserve affordable ART regimens for patients in Namibia and possibly other resource-limited settings.