HIV/AIDS treatment and care
Clinical protocols for the WHO European Region

Protocol 1: Patient Evaluation and Antiretroviral Treatment for Adults and Adolescents

Update

18 July 2008

Page 18: New section 4.4.5, please add the following:

(For the full report on ART failure and strategies for switching ART regimens see box)

4.4.5 Revised definitions of ART failure and strategies for switching ART regimens

Definition of first-line failure

Virological failure

- primary virological failure – no response by patient, i.e., VL does not decrease to < 50 copies/ml on two different occasions after more than six months of ART;
- secondary virological failure – viral rebound, i.e., VL > 50 copies/ml confirmed.

The virological failure scenarios are not necessarily indicators for a switch.

Immunological failure (CD4 cell count, if VL is unavailable)

- 25% drop from the patient's maximum level or
- failure to increase CD4 cell count > 50 cells/mm^3 during the first year of ART.

Poor adherence issues and drug interactions need to be ruled out before failure is confirmed.

Basing ART failure on solely clinical grounds is considered a suboptimal approach; countries are
encouraged to ensure at least regular CD4 monitoring is in place.

Strategies for switching ART regimens

If the second-line regimen contains drugs that exclude the possibility of cross resistance of the
first-line regimen the patient is currently failing, then a resistance test is not necessary in order to make the switch.

Early switch: VL > 400 (> 50– < 1000)* copies/ml.

- Advantages: preservation of treatment options, higher likelihood of effective response,
  decreased risk of non-AIDS and AIDS related events.
- Disadvantages: high costs and more rapid exhaustion of ARV drug options; need for
  routine VL laboratory testing.

Late switch (VL ≥ 1000 – 10 000 copies/ml or a 25% drop in CD4 count)

- Advantage: reduced costs.
- Disadvantages: greater accumulation of resistance mutations and potential enhanced
  transmission of resistant virus; may compromise treatment response; may limit the choice of active ARVs for second-line therapy.

If at 6 months VL > 50 copies/ml, the physician before switching to second-line treatment should assess and address adherence, drug toxicity (substitute toxic drugs) and any drug interactions.

The long-term implications of neither approach are known and studies comparing the switch
management approaches are urgently needed.

Minimum monitoring requirements

- VL should be part of the standard of care of PLHIV
- VL should be undertaken prior to initiation of ART and then at months 1, 3, 6 and 12;
  subsequent monitoring may be at longer intervals for patients responding well to treatment.
- VL every 6–12 months is acceptable if there are local constraints on access or cost.
- CD4 cell counts should be done prior to starting ART, then two to four times in the first
  year; subsequent monitoring may be twice annually.

Definition of second-line failure

The definition is the same as first-line failure but the management differs depending on available drug options and greater use of drug resistance testing. New drug classes should be introduced where possible.

Drug resistance testing

If HIV DR testing is not available after first-line failure, a blood sample should be taken and kept frozen in the event that second-line failure occurs; both blood samples, after first and second-line failure, should then be tested in deciding on a salvage regimen.

* = *More than 50 copies/ml, but less than 1000 copies/ml refers to the secondary definition of first-line failure, switching within this range of VL is an early switch.*