Is ALT control really necessary for routine ART monitoring in resource poor settings?

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Background

In Mozambique the reported prevalence of HIV infection in the adult population is 19.2% (95% CI 15.2%-23.2%), representing 808,000 to 1,700,000 HIV infected people, of which more than 40% are children (5-14 years); 12.5% are under ANP treatment.

In Mozambique, like in several sub Saharan countries, access to ART is still very limited (10.8% of the population in need are covered).

To scale up the number of patients on ART, The Ministry of Health of Mozambique has launched a policy of decentralisation of the comprehensive HIV/AIDS care and treatment to peripheral health centres. MSF is supporting the national plan in the health District of Chaminchulo in Maputo (with an estimated population of 350,000).

At May 2006, MSFCH provides care to 5,700 HIV positive people and ART therapy to 3,275 of them, in a governmental day hospital at district level and using the national guidelines. Aware of unmet needs for treatment, MSF has committed to accelerate and increase inclinations of patients on ART, but this could only go together with the implementation of the national protocol.

In the national treatment guideline, the first-line regimen contains NVP (unless transaminases (ALT) >5x ULN) or EFV for patients in treatment for tuberculosis. In case of severe hepatic toxicity, defined as an increase of ALT > 5 x ULN, ART is interrupted. ART can be re-activated by EFV. The national protocol strongly recommends a regular transaminases assessment before and during the treatment; therefore ALT is checked for all patients eligible for ART at baseline, two weeks after initiation, 1 month and then six monthly, unless abnormalities are encountered.

Performing ALT is very demanding in terms of logistics and costs in resource-poor settings and could be an obstacle to the scaling up policy foreseen by the Ministry of Health and other health partners.

We decided to assess the results in term of impact on patient management and therefore pertinence from a public health perspective of regularly performing ALT, by retrospective analysis of the cohort followed in the day hospital of Alto Mae, District of Chaminchulo in Maputo.

Our data confirmed the increased risk of toxicity in the first 2 months of treatment; an increased surveillance is therefore necessary during this period.

Conclusions

Despite the small number of patients, our study can give an orientation on the pertinence of the regular monitoring of transaminases for patients on ART.

Only 19 (0.6%) of 3,146 patients who started ART developed severe liver toxicity justifying changes in ART because of severe hepatotoxicity, the median ALT value at the time of ART initiation was 37.0 (14.0–129.0) U/L. The median value of ALT measured after initiation of ART was at 1 month follow-up, and was 308 (0.0–897.0) U/L. The median of ALT at interruption of ART was 176.0 (155.0–497.0) U/L. The aggregate increase of ALT from initiation to the date of interruption of ART was 55.0 (15.0–297.0) U/L. As far as the time of interruption is concerned, 52.6% of patients interrupted ART 1 month-follow up, cumulatively, 74% of patients had interrupted at 2 months-follow up.

As far as clinical symptoms and signs are concerned: Thirteen (66.6%) patients who interrupted ART treatment did so because of liver toxicity and sign at the moment of interruption. There were no differences in the baseline median of ALT values between asymptomatic and asymptomatic patients (65 and 99 respectively). The different clinical signs and symptoms equally presented: jaundice, abdominal pain, liver pain and hepatitis symptoms.

(footnotes)
1. Source: MISAU, epidemiological survey 2004