

Poster presentation

Evaluating affordable screening markers to detect HIV-1-infected Ugandan adults with CD4 counts of less than 200 cells/ μ l

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Purpose of the study

Can WHO staging, anaemia or low body mass index (LBMI) be used to identify HIV-infected Ugandans with CD4 counts <200 cells/ μ l?

Methods

From October 1995–April 2006, we screened 3,494 Ugandans, aged 16 years or older, for a cross-sectional study. We analyzed HAART-naïve HIV-infected patients with WHO stages 1–3 who had complete data. Low BMI was BMI <18.5 kg/m², and anaemia a haemoglobin level <11 or 12 g/dl among women and men, respectively.

Summary of results

We analyzed 2,892 patients with median age of 32 years; 2,055 (71%) women; 1,569 (54%) WHO stage 3; 974 (34%) anaemia; 472 (16%) low BMI; and 1,242 (43%) with CD4 counts <200 cells/ μ l. WHO stage 3 compared to WHO stages 1 and 2 had sensitivity and specificity (95% CI) of 70% (67, 72) and 57% (55, 60), respectively, to detect CD4 counts <200 cells/ μ l. Anaemia had sensitivity and specificity (95% CI) of 47% (44, 50) and 76% (74, 78), respectively. Low BMI had sensitivity and specificity (95% CI) of 23% (20, 25) and 89% (87, 90), respectively, against CD4 counts <200 cells/ μ l. WHO stage 3 or anaemia or low BMI had sensitivity and specificity (95% CI) of 79% (77, 81) and 50% (47, 52), respectively.

Conclusion

Only WHO stage 3 had an acceptable sensitivity to identify patients with CD4 counts of <200 cells/ μ l in this setting; whilst specificity was modest. Other screening strategies such as on-site low-cost CD4 testing need to be developed to identify patients in need of HAART in rural Africa and other resource-limited settings.