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FAT MASS RATIO: AN OBJECTIVE TOOL OF HIV LIPODYSTROPHY SYNDROME DIAGNOSIS?

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INTRODUCTION: Large discrepancies in HIV lipodystrophy incidence reported in previous studies are the result of lack of homogeneous criteria for the diagnosis of lipodystrophy. The use of DEXA for determination of fat mass distribution could improve early detection and diagnosis of lipodystrophy.

AIMS: 1. To evaluate the fat mass ratio (FMR) by DEXA as a lipodystrophy index and to correlate it with clinical lipodystrophy evaluation and with intra/extra abdominal fat ratio by CT scan; 2. To evaluate the accuracy of this index in the diagnosis of lipodystrophy.

PATIENTS AND METHODS: We studied 83 HIV-infected patients (23 without lipodystrophy) by DEXA and CT scan. The FMR was defined by the ratio of the trunk fat mass percentage over the limbs fat mass percentage. Results were expressed in mean \pm SE and percentages. To compare the variables and their correlations we used Mann-Whitney test and linear regression.

RESULTS: Clinical lipodystrophy (CL) patients had a significantly higher FMR than patients without lipodystrophy (WL) (CL 2.15 ± 0.13 versus WL 1.27 ± 0.15 , $P < 0.001$). We observed a significant correlation between FMR and intra/extra abdominal fat ratio ($r = 0.64$, $P < 0.001$). Using a FMR cut-off value of 1.5, established as the mean \pm SE of patients without CL, the clinical examination had a sensitivity of 90.2%, a specificity of 43.2%, a positive predictive value of 63.8% and a negative predictive value of 80%.

CONCLUSIONS: Therefore we concluded that the FMR seems to be an objective tool to more accurately diagnose the HIV lipodystrophy syndrome and simultaneously highly correlated with body composition evaluated by CT.



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