Lipoatrophy in pre-pubertal children on HAART in South Africa

**Background**

- Ostracization due to lipoatrophy can be life-threatening in Sub-Saharan Africa
- Yet lipoatrophy in HIV-infected *African* children has been poorly investigated even though they make up 92% of the global burden of paediatric HIV

**Method**

- 100 pre-pubertal (Tanner stage 1) children on HAART
- Lipoatrophy was formally graded by two HIV paediatricians using standardized grading system
- Durations of previous antiretroviral exposures were recorded
- DEXA was performed on 42 patients and 34 HIV-uninfected controls
- Analysis of baseline data

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Results

- Lipoatrophy prevalence was **36%** (CI: 26% to 45%)
- Multivariate model:
  - Cumulative duration of stavudine exposure, but not current ARV exposure, was independently associated with lipoatrophy (OR = 1.7 per 12 months, p = 0.003)
- DEXA results showed no difference between HIV-infected without lipoatrophy vs HIV-uninfected, but could clearly differentiate between HIV-infected children without vs with lipoatrophy
- Lipohypertrophy was not seen at all in this pre-pubertal group

Conclusions

- The prevalence of HAART-related lipoatrophy in pre-pubertal African children is high
- Cumulative ARV exposure is more important risk factor than current ARV exposure
- DEXA scanning accurately differentiates children with vs without lipoatrophy

**Take-home message**

*Surveillance for lipoatrophy is crucial in pre-pubertal African children on HAART, combined with switching to non-thymidine therapy to arrest progression before stigmatization*

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