Comparing hypertension prevalence by HIV status in sub-Saharan African adults: systematic review and meta-analyses

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Background

- People Living with HIV (PLHIV) may experience a higher hypertension prevalence than HIV negative people.¹
- However, the evidence for this is largely from high income countries.²,³
- We examined the hypothesis that living with HIV is associated with higher hypertension prevalence among adults in sub-Saharan Africa.

Methods

- A systematic review of MEDLINE, EMBASE, Global Health, CDSR, CENTRAL and African Journals Online was performed.
- We included cross-sectional studies assessing hypertension prevalence in PLHIV and HIV negative people >15 years, in sub-Saharan Africa.
- Only studies defining hypertension as “blood pressure ≥140/90mmHg”, or as “blood pressure ≥140/90mmHg and/or use of antihypertensives”, were considered.
- Random effects models were used to pool odds ratios for prevalent hypertension in two meta-analyses.

Results

- We found 2,364 reports, of which 12 were selected for analysis (Fig. 1).
- The 12 studies collected data on 107,425 participants between 2003 and 2015, in South Africa, Tanzania and Uganda.
- Risk of bias was low to moderate, with participant selection a key source of bias.
- Hypertension prevalence was 5.3%-51.7% among PLHIV and 8.2%-65.4% in HIV negative individuals.
- The odds of prevalent hypertension were 41% lower among PLHIV than HIV negative individuals when using the ≥140/90mmHg definition (Fig. 2) and 34% lower when using the definition that included medication (Fig. 3).

Conclusions

- Hypertension prevalence was lower among PLHIV than HIV negative people in sub-Saharan Africa.
- Robust studies comparing hypertension prevalence by HIV status in sub-Saharan Africa were scarce, suggesting more primary studies are required.
- These findings should be considered in decisions around implementing integrated HIV-hypertension services.

References