Objective We investigated HIV, its treatment and other risk factors for stroke in Malawi.

Methods We performed a prospective case-control study of 222 adults with acute stroke, confirmed by MRI in 86%, and 503 population controls, frequency-matched for age, sex and place of residence. Multivariate logistic regression models were used for case-control comparisons.

Findings HIV infection (Population Attributable Fraction [PAF] 15%) and hypertension (PAF 46%) were strongly linked to stroke. HIV was the predominant risk factor for young stroke (≤ 45 years), with a prevalence of 67% and an adjusted odds ratio [aOR, 95% CI] of 5.57 [2.43, 12.8]; PAF 42%. There was an increased risk of a stroke in patients with untreated HIV infection (aOR 4.48 [2.44, 8.24]), but the highest risk was in the first 6 months after starting antiretrovirals (aOR 15.6 [4.21, 46.6]). Stroke risk increased with declining CD4+ T-lymphocyte counts ($p=0.008$).

Interpretation HIV infection increases the risk of stroke especially ischaemic stroke in young people; this is largely driven by immunosuppression. However, there is a markedly increased stroke risk in the first 6 months of starting antiretrovirals. A better understanding of this risk is urgently needed in order to try and reduce it.

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HIV, ANTIRETROVIRAL TREATMENT, AND STROKE IN MALAWIAN ADULTS

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