

## **Time to Recognise HIV Infection as an important risk factor of stroke in Sub-Saharan Africa?**

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When it comes to making a case for the growing burden of stroke in Low-to-Middle income countries (LMICs), specifically in sub-Saharan Africa, HIV infection has consistently been neglected. We read with interest The Lancet series on Stroke systems of care and rehabilitation in LMICs, but were disappointed to see HIV overlooked here too.<sup>1,2</sup> According to statistics from the World Health Organization, about 36.7 million people are currently living with HIV, and 1.8 million become infected every year. Antiretroviral therapy (ART) has successfully limited AIDS related complications but has transformed HIV infection to a chronic disease with important complications. HIV is disproportionately concentrated in sub-Saharan Africa, where 71% of the total global burden is found.

The most compelling evidence to link HIV and cardiovascular disease is from a meta-analysis which showed the population-attributable fraction (PAF), increasing globally from 0.36% (95% CI, 0.21%–0.56%) in 1990 to 0.92% (95% CI, 0.55%–1.41%) in 2015<sup>3</sup>. In Sub-Saharan Africa the PAF was as high as 30%. This was associated with a more than 3-fold increase in Disability Adjusted Life Years from HIV-associated cardiovascular disease. These figures have almost

tripled in two decades, and occurred despite antiretroviral therapy. In Malawi, we have shown the PAF of HIV-related stroke to be 15% and identified that HIV infection was now the second leading risk factor for stroke.<sup>4</sup>

We are encouraged that the spotlight for stroke care and rehabilitation is now focusing on Sub-Saharan Africa, however paying insufficient attention to HIV infection could limit progress. Stroke management is different in the context of HIV, and a multi-morbidity approach is needed. For example, there is an extended and mostly treatable list of causes of stroke in HIV which may not be considered if a patient's HIV status is not known.<sup>5</sup> HIV patients with stroke patients can also suffer from the dual burden of two stigmatising diseases which may influence their access to care. Additionally, there are complex drug interactions to consider. To comprehensively design effective stroke care and rehabilitation pathways in HIV endemic regions, we must include HIV on the agenda. In 2019 The American Heart and Stroke Association, for the first time, wrote a scientific statement on HIV infection and cardiovascular disease, setting the tone for urgent action.<sup>5</sup> We urge clinicians and policymakers involved in stroke care to consider the importance of HIV in their setting.

## References

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