

Investigating the early stroke recurrence rate for people who have experienced minor strokes

BACKGROUND:

Ischemic strokes are caused by temporary disruption of blood flow to the brain, and include transient ischemic attacks (TIAs), commonly known as mini-strokes, as well as minor and major strokes. TIAs cause the same symptoms as those associated with minor and major strokes, but in TIAs the symptoms resolve within 24 hours. TIAs do not usually have significant long-term effects in and of themselves, but they are important as warning signs of the potential risk of a more significant stroke.

In carrying out research, TIAs are often considered alongside minor strokes, or as a distinct category. However, there has not been significant research to date focusing on minor stroke as a distinct category, particularly with regard to the potential for recurrence in the short term.

RESEARCHER QUESTION:

Dr. Andy Lim and a team of colleagues are investigating the emergency evaluation and treatment of minor ischemic stroke. This research initiative is a collaboration between the Department of



Neurology and the Department of Emergency Medicine at Monash Health, Victoria, Australia. For this study, the team's objective was to evaluate the likelihood of 90-day stroke recurrence for people who had experienced minor ischemic stroke as distinct from TIA.

“The Vivli platform contains important trial data....Without it, we would not be able to complete the picture.”

- Dr. Andy Lim

FINDINGS

In completing this meta-analysis, the research team was able to establish that the pooled 90-day stroke recurrence rate for minor stroke is 8.6%. Furthermore, this rate appears to be declining by 0.60% per year. This trend seems consistent with those associated with improving outcomes associated with contemporary management of minor stroke and TIA assessed together, as well as for TIA outcomes assessed alone. Establishing a better understanding of the baseline recurrence rate of minor ischemic stroke can help with comparing new treatments.

IMPACT

This research has been presented at an international conference and produced a publication in the *Journal of the American Heart Association*. As Dr. Lim said in discussing this research: “We ultimately aim to find better ways to evaluate and treat patients with minor ischemic stroke. There are many ways to make a difference, and that could be anything from developing a clinical pathway, advocating for process change, or studying drug treatments. This line of research seeks to do all of this.”

RESEARCH PROCESS:

To answer the question of whether isolating data relevant to minor stroke could provide useful information about the potential for recurrence, Dr. Lim's team performed a meta-analysis assessing data from 14 studies comprising 45,462 patients. Researchers combined the results of antiplatelet trials and observational studies and were able to incorporate and assess previously unpublished data on minor stroke from multiple sources.

NEXT STEPS:

READ MORE

[Meta-analysis of early stroke recurrence rate in minor stroke](#) (Vivli Research Request 6866)

[Ninety-Day Stroke Recurrence in Minor Stroke: Systematic Review and Meta-Analysis of Trials and Observational Studies](#) (*Journal of the American Heart Association*)

[Find out more about requesting data from Vivli.](#)