Pathophysiology and Risk of Atrial Fibrillation Detected after Ischemic Stroke (PARADISE): A Translational, Integrated, and Transdisciplinary Approach

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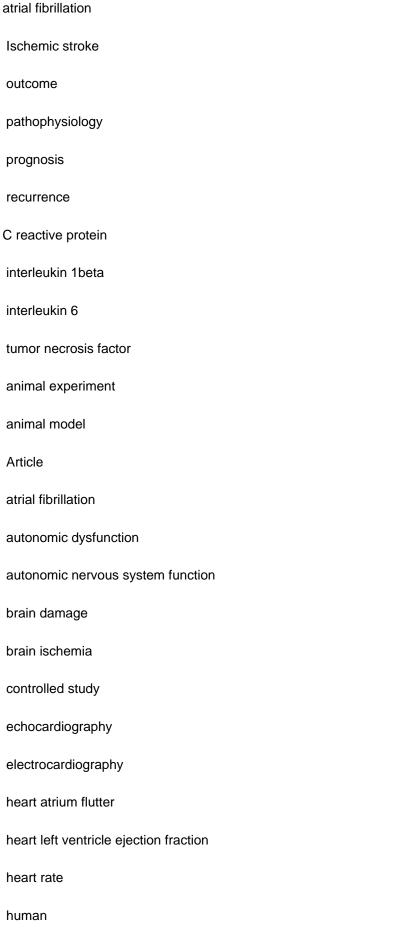
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Background: It has been hypothesized that ischemic stroke can cause atrial fibrillation. By elucidating the mechanisms of neurogenically mediated paroxysmal atrial fibrillation, novel therapeutic strategies could be developed to prevent atrial fibrillation occurrence and perpetuation after stroke. This could result in fewer recurrent strokes and deaths, a reduction or delay in dementia onset, and in the lessening of the functional, structural, and metabolic consequences of atrial fibrillation on the heart. Methods: The Pathophysiology and Risk of Atrial Fibrillation Detected after Ischemic Stroke (PARADISE) study is an investigator-driven, translational, integrated, and transdisciplinary initiative. It comprises 3 complementary research streams that focus on atrial fibrillation detected after stroke: experimental, clinical, and epidemiological. The experimental stream will assess pre- and poststroke electrocardiographic, autonomic, anatomic (brain and heart pathology), and inflammatory trajectories in an animal model of selective insular cortex ischemic stroke. The clinical stream will prospectively investigate autonomic, inflammatory, and neurocognitive changes among patients diagnosed with atrial fibrillation detected after stroke by employing comprehensive and validated instruments. The epidemiological stream will focus on the demographics, clinical characteristics, and outcomes of atrial fibrillation detected after stroke at the population level by means of the Ontario Stroke Registry, a prospective clinical database that comprises over 23,000 patients with ischemic stroke. Conclusions: PARADISE is a translational research initiative comprising experimental, clinical, and epidemiological research aimed at characterizing clinical features, the pathophysiology, and outcomes of neurogenic atrial fibrillation

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interdisciplinary research
major clinical study
male
National Institutes of Health Stroke Scale
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neutrophil lymphocyte ratio
nonhuman
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Stroke

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