EDITORIAL

Shaping the Future of Stroke Management: Latest Innovations and Discoveries

Mufeed Akram Taha [1],* and Haluk Gümüş [2]

[1]*Department of Medicine/Neurology, College of Medicine, University of Kirkuk, Kirkuk, Iraq*
[2]*Department of Neurology, Faculty of Medicine, Selçuk University, Konya, Turkey*

Corresponding author email: mufeedakram@uokirkuk.edu.iq

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Stroke remains a leading cause of disability and mortality worldwide [1], but 2025 has marked significant strides in stroke care, offering renewed hope for patients and healthcare providers alike.

One of the most notable advancements is the exploration of uric acid as a potential adjunct therapy for acute ischemic stroke. Preclinical studies have demonstrated that rodents treated with uric acid exhibited improved long-term outcomes, suggesting its potential efficacy in human trials [2]. Additionally, the use of ultrasound-enhanced systemic thrombolysis, or sonothrombolysis, has garnered attention. By employing ultrasound waves to mechanically disrupt clots, this method aims to enhance the efficacy of traditional thrombolytic agents while potentially reducing associated risks [3].

Rehabilitation post-stroke has seen the integration of virtual reality (VR) technologies. VR-based telerehabilitation offers immersive environments that can motivate patients and provide tailored therapy sessions, especially beneficial for upper-limb recovery [4]. Moreover, the development of assistive devices like the "SixthFinger"—a soft, vision-based, tactile-enabled robotic finger—has shown promise in aiding stroke survivors with daily object manipulation, enhancing their independence and quality of life [5]. Preventive strategies have expanded beyond traditional approaches. Recent research indicates that routine eye tests can predict stroke risk by analyzing retinal blood vessels, offering a non-invasive screening method [6, 7]. Furthermore, studies have highlighted the

potential of simple habits, such as flossing once a week, in reducing stroke risk by up to 44%. This underscores the interconnectedness of oral health and cerebrovascular well-being [8]. Emerging research has brought attention to environmental contributors to stroke. A groundbreaking study revealed a significant presence of microplastics in the arteries of stroke victims, suggesting a potential link between environmental pollutants and cerebrovascular health [9].

The year 2025 has emerged in a plethora of advancements in stroke care, from innovative treatments and rehabilitation tools to novel preventive measures. As research continues to unravel the complexities of stroke, these developments offer a way for more effective, personalized, and holistic approaches to care, ultimately aiming to reduce the global burden of this debilitating condition.

ETHICAL DECLARATIONS

· **Ethics Approval and Consent to Participate**

Not required for Editorial articles.

· **Consent for Publication**

Non.

· **Availability of Data and Material**

Not Applicable

· **Competing Interests**

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