

New research gathers more evidence for innovative stroke treatment

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New research has provided more evidence that an innovative treatment strategy may help prevent brain swelling and death in stroke patients. J. Marc Simard, professor of neurosurgery at the University of Maryland School of Medicine, along with colleagues at Yale University and Massachusetts General Hospital, found that Cirara, an investigational drug, powerfully reduced brain swelling and death in patients who had suffered a type of large stroke called malignant infarction, which normally carries a high mortality rate.

The findings were presented at the International Stroke Conference, held last month in Los Angeles.

"These results are quite promising," says Dr. Simard. "We have a lot more work to do, but this approach could be an effective strategy for severe stroke patients who currently have no good treatment options."

In October 2015, Dr. Simard and his colleagues, Kevin N. Sheth, of Yale, and W. Taylor Kimberly, of Massachusetts General Hospital, presented early data at the Neurocritical Care Society annual meeting, showing that the medication was effective in reducing [brain](#) swelling.

In [stroke patients](#) who were aged 70 or younger, the researchers found that six months after the stroke, the group of patients who had been given Cirara had a three-fold reduction in overall mortality and a ten-fold decrease in death from brain swelling.

Swelling is a key complication in many central nervous system ailments, including stroke, traumatic brain and spinal cord injuries, and others. In all of these conditions, tiny blood vessels react to injury in a way that ultimately can be counterproductive, often leading to severe swelling of brain tissues that can be fatal. Dr. Simard and his colleagues discovered that in many of these conditions, the sulfonylurea receptor 1 (Sur1) plays a major, previously unrecognized, pathological role. It appears that Sur1 is involved in many of the most dangerous symptoms in these diseases, including cell swelling, cell death, and the breakdown of the barrier that normally protects the brain and inflammation.

The researchers have focused primarily on a drug called glibenclamide (also known as Glyburide), which inhibits Sur1. Glibenclamide is a well-known, safe drug that has been in use for nearly 50 years to treat adult onset diabetes.

Cirara, which is made by Remedy Pharmaceuticals, which is based in New York City, is an exclusive intravenous formulation of glibenclamide.

"This new data shows a continued reduction in mortality and improvement in functional scores," Sven Jacobson, CEO of Remedy Pharmaceuticals. "The data further confirms the mechanism of action of Cirara."

The researchers and Remedy are now planning to undertake a Phase 3 trial. The drug will be given to a larger group of people to confirm its effectiveness and compare it to commonly used [stroke](#) treatments.

Provided by University of Maryland School of Medicine

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