

A better clot-buster drug for strokes?

April 26 2018, by Steven Reinberg, Healthday Reporter



(HealthDay)—After a stroke, many patients are given the clot-busting intravenous drug alteplase, but another drug may be more effective, Australian researchers report.

Among more than 200 [stroke victims](#), TNKase (tenecteplase) was about twice as effective as alteplase in restoring blood flow to the brain, and it also resulted in less disability, the scientists found.

"Tenecteplase is likely to become the preferred medication for clot-dissolving in stroke patients," said lead researcher Dr. Bruce Campbell, head of the stroke department at the Royal Melbourne Hospital in Parkville. "It is likely to change stroke treatment guidelines and clinical practice."

Campbell said tenecteplase is more effective than alteplase because of differences in the enzymes in each [drug](#).

Although both drugs work in the same way, tenecteplase is better at attacking and dissolving clots, and more resistant to factors that inhibit the breakdown of clots, he said.

For either drug to be most effective, it needs to be given as soon as possible after a stroke occurs. In this study, patients were given the drugs within 4.5 hours after the onset of a stroke, Campbell said.

Although tenecteplase appears to be more effective for stroke patients, it's not approved for that use in the United States, according to Dr. Rohan Arora, director of [stroke](#) at Long Island Jewish Hospital in Forest Hills, N.Y.

In 2000, the U.S. Food and Drug Administration approved tenecteplase for use after a [heart attack](#), Arora said.

"Tenecteplase is being widely used in developing countries, such as India," he said. "One reason is it's cheaper than alteplase."

In the United States, tenecteplase costs about \$5,800, versus alteplase,

which costs \$8,000, Arora said.

In addition, tenecteplase is easier to give, requiring only a single injection, while alteplase requires an injection and an IV drip, he added.

Arora explained that tenecteplase is not widely used in the United States for [heart attack patients](#) because these patients are typically treated with angioplasty or heart bypass surgery.

For the new study, which did not receive drug company funding, Campbell and his colleagues randomly assigned 202 [stroke patients](#) to either alteplase or tenecteplase before surgery to remove clots.

The researchers specifically looked to see which drug was better at restoring blood flow to clot-blocked blood vessels in the brain, and which drug resulted in patients having better outcomes.

The investigators found that 22 percent of the patients treated with tenecteplase had more than 50 percent of [blood flow](#) return to the brain, compared with 10 percent of those treated with alteplase.

Patients treated with tenecteplase also had better functional outcomes after 90 days than those given alteplase, the findings showed.

Bleeding into the brain, the most serious side effect of either drug, occurred in 1 percent of [patients](#), regardless of which drug they received, Campbell said.

The report was published April 26 in the *New England Journal of Medicine*.

More information: Bruce Campbell, MBBS, Ph.D., head, stroke department, Royal Melbourne Hospital, Parkville, Australia; Rohan

Arora, MBBS, director, stroke, Long Island Jewish Hospital, Forest Hills, New York; April 26, 2018, *New England Journal of Medicine*.

For more on stroke, visit the [National Stroke Association](#).

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