

Neurologists describe most feared and devastating strokes

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Among the most feared and devastating strokes are ones caused by blockages in the brain's critical basilar artery system. When not fatal, basilar artery strokes can cause devastating deficits, including head-to-toe paralysis called "locked-in syndrome."

However, a minority of patients can have good outcomes, especially with new MRI technologies and time-sensitive treatments. These treatments include the clot-busting drug [tissue plasminogen activator](#) (tPA), and various new-generation neurothrombectomy devices, according to a review article in *MedLink Neurology* by three Loyola University Medical Center neurologists.

About 85 percent of strokes are ischemic, meaning they are caused by blockages in blood vessels. (The remaining strokes are caused by bleeding in the brain.) About 4 percent of all [ischemic strokes](#) are caused by blockages in the basilar artery system. The basilar artery supplies oxygen-rich blood to some of the most critical [parts of the brain](#).

The first clinical description of a basilar artery stroke was reported in 1868, according to the MedLink article, which was written by Loyola neurologists Sarkis Morales Vidal, MD, (first author); Murray Flaster, MD, PhD; and Jose Biller, MD; and edited by Steven R. Levine, MD, of the SUNY Health Science Center.

A character in Alexandre Dumas' novel, "The Count of Monte Cristo," described as a "corpse with living eyes," had what appears to be locked-

in syndrome. More recently, the book and movie "The Diving Bell and the Butterfly" describe a French journalist with locked-in syndrome. The journalist was mentally intact, but able to move only his left eyelid. He composed a moving memoir by picking out one letter at a time as the alphabet was slowly recited.

The MedLink article reports that an estimated 80 percent of locked-in patients live for at least five years, and some patients have survived for more than 20 years. One survey of long-term survivors found that 86 percent reported their attention level was good, 77 percent were able to read and 66 percent could communicate with eye movements and blinking. Forty-eight percent reported their mood was good.

The review article cites a study of basilar artery stroke patients that found that a month after the stroke, one-third of patients were dead and one-third needed help for activities of daily living such as bathing, dressing and eating.

Most basilar artery strokes are caused by atherosclerosis (hardening of the arteries). The second-leading cause is clots.

Leading risk factors for basilar artery strokes are high blood pressure, diabetes, smoking, high cholesterol, coronary artery disease and peripheral vascular disease. Affected individuals tend to be over age 50. Basilar artery strokes are more common in men than in women.

Provided by Loyola University Health System

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