

Unusual case of a woman who suffered stroke during sex

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Minutes after having sexual intercourse with her boyfriend, a 35-yearold woman suddenly felt her left arm go weak. Her speech became slurred and she lost feeling on the left side of her face.

She was having a stroke. Doctors later concluded the stroke probably was due to several related factors, including birth control pills, a venous blood clot, sexual intercourse and a heart defect.

Doctors at Loyola University Medical Center describe the unusual case in the *Journal of Stroke and Cerebrovascular Disease*.

Birth control pills slightly increase the risk of blood clots. Doctors believe a small clot formed in one of the veins in her thigh, broke loose and traveled to the right atrium (the heart's upper right pumping chamber). Normally in such cases, the clot will get pumped out of the right atrium and travel to the lungs, where it may harmlessly dissolve.

In this case, there was a hole in a wall of the heart separating the right atrium from the left atrium. Pressure changes in the heart, triggered by sexual intercourse, enabled the clot to travel through the hole from the right atrium to the left atrium. From there, the clot traveled up to the brain. It lodged in a narrow blood vessel, blocking blood flow to an area of the brain that controls movements on the left side of the body, said Dr. Jose Biller, co-author of the report and chairman of the Department of Neurology at Loyola University Chicago Stritch School of Medicine.



The woman was taken to a community hospital, then transferred to Loyola. There was still a chance doctors could reverse stroke damage, but time was running out.

In strokes caused by clots, a drug called tPA can dissolve the clot and restore blood flow before brain cells are irreversibly damaged. tPA is safe and effective if given intravenously within three hours of the onset of symptoms.

The woman arrived at Loyola six hours after her stroke. It was too late to receive tPA given intravenously. But there was a chance the clot buster drug still could work if it were delivered directly into the affected blood vessel in the brain.

An interventional neuroradiologist inserted a catheter (thin tube) into a groin artery, and guided it up to the spot in the brain where the clot was lodged. After the catheter delivered the tPA, the clot began to dissolve.

The improvement was immediate and dramatic. When the woman arrived at Loyola, her stroke score was 13, on a scale of 1 to 43, with 43 representing the most catastrophic outcome. Within an hour of treatment, her score dropped to 5. Her stroke score dropped to 3 after 12 hours and to 1 after two months. Her only lingering symptoms were a slight weakening of her facial muscle and minimal impairment of her left hand, said Dr. Simona Velicu, who assisted Biller. Velicu, a neurology resident at Stritch, is lead author of the case report.

Doctors prescribed aspirin and a blood thinner, advised the woman to stop taking birth control pills and scheduled a follow-up procedure to repair the hole in her heart. The defect, called a patent foramen ovale (PFO), occurs in about 1 in 4 adults. While in many people a PFO will never cause problems, the defect might be associated with an increased risk of stroke. How these patients should be managed remains



controversial.

Dr. Fred Leya, an interventional cardiologist, used a catheter to place a device in the woman's heart that plugged the hole. Leya has done about 150 PFO repairs, and is participating with his neurology colleagues in a clinical trial of a leading repair device. Leya is a professor of medicine in the Department of Cardiology at Loyola's Stritch School of Medicine.

There are no statistics on the number of patients who have experienced strokes during sexual intercourse. While it appears that such strokes are rare in young adults, a few case reports have been reported. A 2004 report in the *Archives of Neurology* reported on four patients who had strokes during intercourse: a 38-year-old man and three women in their twenties. Like the Loyola patient, they all had the PFO defect.

Source: Loyola University

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