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A first in surgery

New procedure designed to prevent strokes performed at the Glendale Adventist Medical Center on Friday.

By Vince Lovato News-Press and Leader

GLENDALE—Dr. George Rappard successfully placed a stent in the brain of a patient Friday at Glendale Adventist Medical Center in a pioneering surgery designed to prevent a debilitating or deadly stroke.

The 90-minute procedure was the first such operation in California and one of only 10 performed nationwide, said Rappard, the medical director of Glendale Adventist's neuroscience program.

"[The patient] was having mini strokes and we've been treating her ineffectively with pills," said Rappard, who could not release the patient's name. "This operation should resolve the cause of her mini strokes, and she should go on to live the rest of her life [without limitations]. She was active and thoughtful before and she will be active and thoughtful again."

Once a blood vessel in the brain is blocked or closes, it cuts off blood to the area and causes a stroke, said Rappard, a 1984 La Cañada High School graduate.

The Wingspan Stent, made by Boston Scientific, a medical supply company, is the first of its kind to be approved by the Food and Drug Administration, Rappard said. It is a wire-mesh tube made of super-elastic metal that is smaller than a grain of rice.



Dr. George Rappard and his surgical team perform an unusual stent procedure at Glendale Adventist Medical Center.

The stent is guided through the femoral artery in the upper leg or groin and maneuvered up to the blockage in the blood vessel in the brain, Rappard said. Once in place, it holds the vessel open permanently, he said.

Stroke is a leading cause of disability and death in the United States, and 850 people in Glendale suffered a stroke last year, he said.

Friday's surgery was performed on a woman in her 70s, under general anesthesia. She should be able to go home in a few days because the procedure was minimally invasive, Rappard said.

The surgery was also unusual because it was performed at a community hospital, whereas groundbreaking procedures are usually available only at medical universities, Rappard said.

"We started this program about a year ago, and since then we've developed a busy neurovascular practice," Rappard said.

"We have a progressive staff ... and they are very committed to bringing cutting-edge technologies to the area." The hospital had used products form Boston Scientific before with good success, said Kevin Chien, manager of market development for Boston Scientific, based in Northern

California. One of the products was a stent used to repair bulging vessels -- aneurysms -- outside the brain, Chien said.

"So it's a similar stent in some ways and Dr. Rappard has a great reputation in Southern California," Chien said. "It was a natural progression for use."

Still, the brain stent is a much more complex engineering challenge, Chien said.

"The stent is designed for brains, which have fragile and tortuous vessels, unlike the heart, where they are larger and encased in muscle," Chien said.

"The brain vessels are encased in cerebral fluid, and the stents have to bend yet be gentle enough to maneuver around the curves and delicate enough to not puncture the vessel."