

News Release
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**UAMS is First in Arkansas to Use New Technology
to Remove Valve Infection, Debris Without Surgery**

LITTLE ROCK — A cardiologist at the University of Arkansas for Medical Sciences (UAMS) is the first physician in Arkansas to use a new device to remove infectious vegetation from a woman's heart valve in a 45-minute minimally invasive procedure.

Subhi Al'Aref, M.D., an assistant professor in the Division of Cardiology in the Department of Internal Medicine in the UAMS College of Medicine, said the patient was a 28-year-old woman who had developed an infection in her tricuspid valve.

Although the infection was being treated with antibiotics, doctors wanted to remove it quickly before it could spread to other organs, or further damage the heart. However, heart surgeons deemed open-heart surgery too risky. Al'Aref said those factors and the woman's young age created an opportunity to try out the AlphaVac, a portable device that received FDA approval in September for the nonsurgical removal of thrombi, emboli or clots from the venous system. The device resembles a vacuum cleaner hose with a squeeze handle.

On April 6, Al'Aref inserted a cannula on one end of the device into the woman's right femoral vein through a small opening in the skin, as she lay on a table under anesthesia. Watching his progress on an echocardiogram, he then guided the cannula through the vein into the heart, stopping as he approached the wad of debris that was visible on the screen. Al'Aref then squeezed the handle, creating suction that gently pulled the debris into the cannula without stretching or harming the valve.

The captured vegetation was then sucked out of the body through the tubing, which expelled it into a clear waste bag, instantly removing the threat of a rapidly spreading, dangerous infection. The patient recovered immediately.

Al'Aref said the procedure can be done on an outpatient basis.

"It provides options for a lot of patients," Al'Aref said. "It gives us hope for a lot of patients who otherwise don't have options."

Malley Bailey, a representative for AngioDynamics that makes the device, said the AlphaVac system is intended to be used with commonly available vascular access tools to facilitate the nonsurgical removal of thrombi, emboli or clots during minimally invasive percutaneous procedures.

Bailey said the device is being introduced in hospitals across the country, and UAMS is the first to use it in Arkansas and surrounding mid-South area.

The same company also makes the AngioVac system, which is used with a pump, filter and reinfusion cannula to avoid the need for open-heart surgery. The AngioVac also is commonly used to “vacuum out” undesirable intravascular material, but it requires the patient to be hooked up to a bypass machine and takes several hours to complete. The AlphaVac system doesn’t require the use of a bypass machine and is a much quicker and less invasive procedure.

Physicians in the UAMS Heart Center first used the AngioVac system in late 2020 to remove a large blood clot that was headed from a man’s heart into his lung, a situation known as thrombus-in-transit.

UAMS is the state's only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; a hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and seven institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging, Translational Research Institute and Institute for Digital Health & Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS' clinical enterprise. UAMS is the only adult Level 1 trauma center in the state. *U.S. News & World Report* recognized UAMS Medical Center as a Best Hospital for 2021-22; ranked its ear, nose and throat program among the top 50 nationwide for the third year; and named five areas as high performing — colon cancer surgery, diabetes, hip replacement, knee replacement and stroke. *Forbes* magazine ranked UAMS as seventh in the nation on its Best Employers for Diversity list. UAMS also ranked in the top 30% nationwide on *Forbes*’ Best Employers for Women list and was the only Arkansas employer included. UAMS has 3,047 students, 873 medical residents and fellows, and six dental residents. It is the state's largest public employer with more than 10,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses, Arkansas Children's, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on [Facebook](#), [Twitter](#), [YouTube](#) or [Instagram](#).

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