

URMC introduces new treatment for life-threatening aneurysms

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Surgeons at the University of Rochester recently introduced a new device to treat potentially deadly aortic aneurysms in the abdomen, reducing the need for invasive surgery and a lengthy recovery. URMC's Heart and Vascular Center is one of just 30 centers in the United States to use a custom-made, fenestrated endovascular graft for the most challenging cases.

An [abdominal aortic aneurysm](#) is a bulge of the wall of the [aorta](#), the large blood vessel that carries oxygen-rich blood from the heart to the rest of the body. When the aneurysms form near arteries that feed other organs, such as the kidneys, [small bowel](#) or liver, surgery is often required to repair it. Without treatment, patients with aortic aneurysms are at risk for sudden death. If the bulge gets too large and ruptures, it causes uncontrolled internal bleeding that can be fatal.

URMC surgeons can now repair the complex aneurysm using the new device, which is a tubular, fabric endograft with custom-positioned holes, or fenestrations, to ensure proper blood flow through the aorta and to the kidneys and nearby organs.

"This is a significant advance for patient care," said David Gillespie, M.D., chief of Vascular Surgery, an integral component of the URMC Heart and Vascular Center. "Until now, treating these patients with a traditional endograft has been difficult. This new stent graft is a great new option for these patients and can give them peace of mind."

Gillespie recently implanted the Zenith® Fenestrated AAA Endovascular Graft by Cook Medical in the aorta of a 62-year-old Rochester man.

The endograft was placed using a small incision in the groin. Using image-guided technology available in URMC's newly renovated hybrid operating room, doctors fed the device through the arteries, replacing the enlarged blood vessel and allowing for the safe passage of blood to the lower extremities and other organs.

Because every patient's anatomy is slightly different, each device is custom manufactured in Australia using 3-D computer models based on a spiral CT scan of the patient.

Abdominal aortic aneurysms are painless and often discovered by accident, when doctors are screening for other diseases or conditions. Most people don't experience any symptoms, though some patients describe a pulsing feeling in the abdomen or unexplained severe pain in their abdomen or lower back.

The condition is largely genetic, and is associated with a family history, lung disease and cigarette smoking, hypertension, and hernias. They are most commonly found in men over 60.

Each year, physicians diagnose approximately 200,000 people in the United States with abdominal [aortic aneurysms](#). Nearly 15,000 of them are at risk of rupture, because of their size, and as a result, could be deadly.

The hybrid operating room is ideal for endovascular and cardiac procedures. It designed for surgeons to provide complex procedures using less invasive techniques. It combines diagnostic and operative equipment with the most advanced imaging. Cutting-edge X-ray and 3-D

imaging technology allows the surgical team to identify and treat problems in real-time so that they can evaluate the procedure and begin more advanced operations immediately, if necessary.

Provided by University of Rochester Medical Center

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