Patient Heal Thyself - The Best Source For Aortic Grafts

A vascular surgical technique pioneered at UT Southwestern Medical Center calls for replacing infected aortic grafts with the body's own veins. Early results show a patient's veins to be more durable and less prone to new infection than similar procedures using synthetic or cadaver grafts.

Aortic graft infections are one of the most serious complications in patients undergoing aortic grafting procedures for peripheral arterial disease(PAD) and aortic aneurysms. Typically, synthetic grafts made of Dacron, a polyester material, are placed in the aorta and femoral arteries in the abdomen and groin, which feed blood to the legs. But in about 1 percent to 2 percent of these patients, the grafts become infected – a complication that causes amputation and death if left untreated.

Dr. G. Patrick Clagett, chief of vascular surgery at UT Southwestern, pioneered a technique called the neo-aortoiliac system (NAIS) that repairs these aortic-graft infections. The procedure involves removing the infected graft and replacing it with sections of femoral-popliteal veins harvested from the patient's thighs, rather than another synthetic graft or vessels harvested from human cadavers.

In a recent study published in the *Journal of Vascular Surgery*, Dr. Clagett and his team reported on 187 patients at UT Southwestern treated for aortic graft infections who underwent the NAIS procedure from 1990 to 2006. It is the largest group of such patients ever studied, and the researchers found that the incidence of re-infection was lower and the procedure resulted in superior durability with much lower long-term amputation rates when compared with other operations to treat this condition.

"This operation has gained favor worldwide in the treatment of this devastating condition," said Dr. Clagett. "Since performing the first operation here in the 1990s, we have accumulated data over the years and have found this procedure to be far superior in overall patient outcomes."

Simply replacing the old Dacron graft with a new synthetic graft can result in devastating infection of the new one, said Dr. Clagett. His team and others also have found that the new synthetic or cadaver grafts tend to develop clots and new blockages.

"When we use the patient's own tissue to construct a new graft, it provides an advantage because they are less likely to form clots within the graft and less likely to develop new blockages," Dr. Clagett said. "Patients also need fewer subsequent procedures."

He added that patients who have the NAIS procedure don’t need to be on lifelong antibiotic therapy. Because the aortic reconstruction is fashioned with the patient’s own tissue, there is no foreign material that is prone to re-infection.

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