

Physician Forum

Excellence Above All

NEW SYNTHETIC VASCULAR GRAFT PREVENTS THROMBOSIS IN BELOW-KNEE BYPASSES

A significant new option in the surgical treatment of peripheral arterial disease, which affects as many as 12 million Americans over the age of 50, is now available at Jewish Hospital Heart & Lung Institute. Vascular surgeon Stephen Self, M.D., with Thoracic & Vascular Associates, P.S.C., is among the first in the United States to implant the new GORE PROPATEN Vascular Graft, which is uniquely engineered to reduce the risk of thrombosis.

Approved for peripheral use in the United States in November 2006, this graft has been successfully implanted in over 10,000 patients during the four years of its commercial availability overseas. It is the first vascular graft available in the United States that has a blood-thinner bonded to its surface to prevent clotting, and is part of an emerging class of products that combine mechanical and biological elements.

Graft's unique engineering retains the anticoagulant properties of heparin

The use of autologous veins to circumvent blocked arteries has been the standard of care for below-knee bypasses because synthetic grafts have not matched the veins' clinical performance. This revolutionary new graft was designed to address the gap in performance between synthetic and vein grafts by bonding the drug heparin to its luminal surface. As Dr. Self explained, "The graft prevents the formation of new blood clots, which can lead to vascular graft failure, because it remains on the graft instead of flowing into the bloodstream."

The difference comes down to the molecular level. Heparin molecules line the interior surface of the GORE PROPATEN Vascular Graft. They are covalently bonded to the surface through a proprietary end-point attachment mechanism that anchors them in place while leaving the active sites of the molecules open, maintaining the heparin's anticoagulant properties. This allows the inside surface of the graft to retain its thromboresistance over time. In addition, because one end of the heparin molecule is anchored to the graft's surface, there is no release of the drug into the patient's system.

Performance is similar to that of autologous vein grafts

The average one-year primary patency for the GORE PROPATEN Vascular Graft in below-knee bypasses has been reported to be 80 percent. This compares favorably to the one-year patencies for autologous vein grafts, which average 81 percent. It outperforms ePTFE synthetic grafts, which average 66 percent in the same application.

For more information about this exciting new surgical option for the treatment of peripheral artery disease, contact Dr. Self's office at (502) 589-3173, or call Jewish Hospital Heart & Lung Institute at 587-4556.

Jewish Hospital & St. Mary's HealthCare
Physician/Hospital Development
250 E. Liberty Street, Suite 201
Louisville, KY 40202
(502) 568-6655 www.jhsmh.org

