Connections

The Rush Arthritis and Orthopedics Institute Newsletter

Volume 6 · Number 2 · Fall 2000

Meniscus transplants: promising new therapy for debilitating knee pain

Some people never get over the pain and swelling of the knee that develop after an injury incurred in sports or other strenuous activities. When the injury affects the cartilage in their knee, their doctors may first try to relieve the symptoms with over-thecounter medications that reduce pain and swelling or with cortisone injections, a wrap or brace or physical therapy.

If these treatments do not work and if the underlying problem involves damage to the meniscus—a crescent-shaped piece of cartilage that cushions the bones in the knee—an orthopedic surgeon may try to repair the damaged meniscus or remove part or all of it through surgery.

But removing the meniscus can lead to arthritis of the knee early in life. To help prevent early development of arthritis and relieve persistent pain and swelling of the knee, surgeons from the Rush Arthritis and Orthopedics Institute may recommend a meniscus transplant.

"Meniscus transplants are done for patients who are physically active and relatively young—usually under 50 or 55 years old," says Brian Cole, MD, MBA, Director and Founder of the Rush Cartilage Restoration Center, the first center of its kind in the United States. The center provides complete management of arthritis of the knee, short of joint replacement.

"The candidates for a transplant must have had their entire meniscus or large portions of it removed due to injury, but they continue to have activity-related pain and swelling in the knee. The patient must also have minimal arthritis in the knee joint," Dr. Cole says.

Before the transplant is done, surgeons take undamaged meniscus from cadavers, test it to make sure it has no diseases that can be transmitted to the patient,



Brian Cole, MD, with clinical nurse Michelle DiMasi, RN

freeze it to preserve it and then match the meniscus by size to the patient who needs it.

"There is no risk of disease transmission with the transplant, nor is rejection a problem because cartilage, unlike organs that are transplanted, has few cells for the human body to reject," according to Dr. Cole's nurse clinician, Michelle DiMasi, RN, BSN.

"We're really doing the transplant so patients can be more comfortable in their daily activities of living. Not uncommonly, however, patients can get back to a high level of activity, such as running," she says. "We are more likely to perform this procedure on someone who has already had to give up high-level activities due to the pain and swelling in the knee and is now having problems even with normal activities."

Dr. Cole has been performing meniscus transplants for more than seven years. Studies have shown their effectiveness in the short and intermediate term, and long-term studies are now emerging.

"In 80 to 95 percent of the cases, we can relieve activity-related pain and swelling," DiMasi says. "We expect that in the long term the progression of arthritis will be slowed and the possible need for joint replacements eliminated in those who have had a meniscus transplant." •

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