Dallas area cornea shortages could benefit from national study

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Surgeons and patients from UT Southwestern Medical Center and UT Southwestern Transplant Services Center joined in a landmark study showing that corneas from older donors are as successful for transplants after five years as is tissue from younger donors, allowing possible expansion of the donor pool.

Based on findings from the study, the age pool of corneas for transplant should be expanded to include donors up to 75 years of age. The study was funded by the National Eye Institute (NEI), one of the National Institutes of Health (NIH), and published in the April issue of *Ophthalmology.*

“The majority of donors have been older, but there has been a great prejudice against using older tissue for fear it was going to wear out faster. So many doctors pass on tissue from older donors,” said Dr. Dwight Cavanagh, professor and vice chairman of ophthalmology at UT Southwestern, which transplants more than 200 corneas annually. Dr. Cavanagh served as principal investigator for the Dallas study.

“The data is very convincing - in fact, it is ice cold - that there isn’t a difference between old and young tissue. What matters is how many cells are alive in the tissue regardless of the age of the donor. And there are plenty of people of older age who have high cell counts,” said Dr. Cavanagh, medical director for the Transplant Services Center, which serves as the eye bank for Dallas-Fort Worth and surrounding areas.

UT Southwestern was one of 80 sites that participated in the Cornea Donor Study, which tracked patients over five years. Included were more than 20 patients from UT Southwestern's corneal transplant program.

"The results are exactly what you'd hope for - that there is absolutely no difference between a 25-year-old and a 65-year-old in terms of how long it's going to last. That means we can use a whole bunch of tissue now that there was prejudice against using," said Dr. Cavanagh, who was among the researchers who conceived and encouraged implementation of the study.

Expanded testing for cornea donors is expected to limit the number available for transplants, along with the increasing popularity of laser surgeries, which often rule out the cornea for transplants. Donated corneas not used for transplants are still used in research.

The findings are particularly important around Dallas-Forth Worth, which needs more donors, said Ellen Heck, a study co-author and executive director of the Transplant Services Center. The center has to import more than 200 corneas annually from outside the area's donor pool to meet local need.

"The reason this is important to look at is because we're an aging population," Ms. Heck said. "People are older now at the time of death than they used to be, so to meet an increasing need for corneas, we needed to know whether we can use corneas from older donors."

The Transplant Services Center currently accepts corneal tissue from donors up to age 70 and is reviewing the results of the study to determine whether it should expand the age range to 75, she said.

"We don't want to exclude potentially usable tissue when there is a

waiting list," said Ms. Heck, who sits on the executive committee for the Cornea Donor Study. "We're always looking for donors and we always have people listed for corneal transplants. We do transplants every week in this community."

Locally, the Transplant Services Center had 642 corneal donors in 2007. Of those, 379, or about 60 percent, were age 50 or older. The center provides corneas for the North Texas region's roughly 15 corneal transplant surgeons on a first-come, first-served basis. Nationally, about 33,000 corneal transplants are performed annually, to replace diseased corneas or those damaged by trauma.

Cornea transplants have a high success rate (80 percent to 90 percent) and don't have the same rejection issues common to solid organs, such as livers and hearts. Nor do they require tissue matching. Donors with vision problems such as near- or far-sightedness or even glaucoma are not excluded unless their corneas are damaged.

Source: UT Southwestern Medical Center

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