

Surgeon-dissected precut DSAEK tissue

Significant debate and study has gone into addressing the issue of precut tissue for Descemet's stripping automated endothelial keratoplasty (DSAEK) surgery and its comparison with surgeon-prepared tissue¹⁻⁵. Although published literature has shown eye bank pre-cut tissue to be comparable to tissue dissected at the time of surgery, surgeons continue to have concerns about varying quality of tissue preparation between different institutions¹⁻⁵. Possible tissue collapse on the artificial anterior chamber, decentration of the microkeratome cut, loss of tissue marking, lack of anterior cap adherence to posterior lamella, anterior edge undermining, and other tissue preparation problems continue to keep some surgeons from moving to exclusively precut tissue⁵. In a prior surgeon survey of tissue from a single eye bank used in 197 DSAEK surgeries, donor tissue preparation difficulties occurred in 10% of cases and the tissue was found to be unacceptable in 2%⁵. Due to these issues and the poor reimbursement for intra-operative tissue preparation, we developed an efficient mechanism for surgeon-dissected precut tissue for our DSAEK patients.

The procedure is performed under a laminar flow hood in the eye bank at our institution by the surgeon approximately 1-2 hours prior to DSAEK surgery. Preparation of donor tissue using a Moria CB microkeratome and artificial chamber system has been previously described³. Necessary instrumentation is assembled by an eye bank technician who also assists during tissue preparation. The entire procedure utilizes sterile technique and complies with Association of Operating Room Nurses (AORN)/Eye Bank Association of America (EBAA)

regulations. Proper tissue preparation is confirmed by the surgeon. A 350 micron microkeratome head is used for all pachymetry measurements without epithelium of 550 microns or more. Alternatively, a 300 micron head is used. The periphery of the microkeratome cut is marked anteriorly using a single use sterile marking pen to allow proper

room, this protocol could be easily instituted to ensure proper tissue preparation and maximize surgical reimbursement.