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SUBMISSION ROLE: Abstract Submission

AUTHORS

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Commercial Relationships Disclosure (Abstract): Björn Bachmann: Commercial Relationship: Code N (No Commercial Relationship) | Philip Enders: Commercial Relationship: Code N (No Commercial Relationship) | Sigrid Roters: Commercial Relationship: Code N (No Commercial Relationship) | Claus Cursiefen: Commercial Relationship: Code N (No Commercial Relationship) | Friederike Schaub: Commercial Relationship: Code N (No Commercial Relationship)

Study Group:

ABSTRACT

TITLE: High accuracy single-pass Ultrathin DSAEK (UT-DSAEK)

ABSTRACT BODY:

Purpose: To evaluate safety, accuracy and reproducibility of a novel microkeratome (SLC Expert Microkeratome[®], Gebauer Medizintechnik GmbH, Neuhausen, Germany) allowing for single-pass preparation of ultrathin Descemet stripping automated endothelial keratoplasty (UT-DSAEK) grafts.

Methods: This is a retrospective analysis of 5 eyes with corneal endothelial decompensation in which UT-DSAEK was performed using the SLC Expert Microkeratome[®]. Cutting depth was based on donor thickness measured by AS-OCT (Visante-OCT[®] Anterior Segment Model 1000, Zeiss, Jena, Germany) along 4 meridians directly before preparation and adjusted to a target central graft thickness between 50-80 µm. After preparation control AS-OCT measurements were performed. 1 and 3 months after UT-DSAEK follow-up examinations were performed including visual acuity, corneal thickness and graft thickness (SPECTRALIS[®] Anterior Segment Modul, Spectral-Domain OCT, Heidelberg Engineering GmbH, Heidelberg, Germany)

Results: All donor preparations were performed without complications. In all cases deviations in central graft thickness from targeted thickness were less than 20 µm at each time point (average deviation to target thickness directly after preparation: 13.36 ± 6.61 µm, $p=0.445$; at 1 month: 4.0 ± 5.73 µm, $p=0.222$; at 3 months: 5.53 ± 6.63 µm, $p=0.097$). Peripheral graft thickness showed uniformity in relation to cutting direction ($p=0.146$).

Conclusions: The SLC Expert Microkeratome[®] reliably cuts ultrathin grafts in a single-pass technique with high accuracy.

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DETAILS

PRESENTATION TYPE: #1 Paper, #2 Poster

CURRENT REVIEWING CODE: 1740 corneal endothelium - CO

CURRENT SECTION: Cornea

KEYWORDS: 183 cornea, 468 transplantation, 500 wound healing.

Clinical Trial Registration (Abstract): No

Other Registry Site (Abstract):

Registration Number (Abstract):

Date Trial was Registered (MM/DD/YYYY) (Abstract):

Date Trial Began (MM/DD/YYYY) (Abstract):

Grant Support (Abstract): No

Support Detail (Abstract): None

TRAVEL GRANTS and AWARDS APPLICATIONS

AWARDS: