

Intraoperative OCT Using the Bioptigen OCT

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Purpose: To assess the feasibility and utility of performing ocular coherence tomography (OCT) during corneal and retinal surgical interventions.

Material & Methods: A hand-held, spectral domain OCT (SDOCT) device (Bioptigen, North Carolina, USA) was used in this small pilot study, allowing imaging of surgical scenarios not previously amenable to OCT analysis.

Results: Imaging was performed in corneal and retinal surgical cases. Immediate anatomic changes were demonstrated intraoperatively during descemet stripping automated endothelial keratoplasty, vitreomacular traction release and repair of a full thickness macular hole.

Conclusions: This pilot study demonstrates that intraoperative SDOCT can be performed and is capable of illustrating immediate changes in surgical anatomy.

Further studies may show its applicability to other settings such as the pericatric retina service, pediatric neuro-ophthalmology, the neonatal intensive care unit and with animal studies.