

## **ABSTRACT TITLE**

**TITLE:** Tube Shunt versus Trabeculectomy Surgery in Patients with Glaucoma Associated with Ocular Inflammation

## **PROGRAM # (Final ID)**

**ABSTRACT FINAL ID:** 4767 - D0151

**SESSION TYPE:** Poster Session

## **POSTER BOARD # (DOI)**

**DIGITAL OBJECT IDENTIFIER (DOI):** D0151

## **PRESENTATION START/END**

**SESSION ABSTRACT START TIME:** 11:00 AM

**SESSION ABSTRACT END TIME:** 12:45 PM

## **SESSION # (Abbreviation)**

**SESSION ABBREVIATION:** 442

**SESSION TITLE:** Surgery and Wound Healing

**SESSION DAY & DATE:** Wednesday, May 8, 2013

**SESSION START TIME:** 11:00 AM

**SESSION END TIME:** 12:45 PM

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**INSTITUTIONS (ALL):** 1. Ophthalmology, Washington University in St. Louis, St. Louis, MO, United States.

### **Study Group:**

### **ABSTRACT BODY:**

**Purpose:** To compare the surgical outcomes of tube shunt versus trabeculectomy with antimetabolite surgery in patients with glaucoma associated with ocular inflammation.

**Methods:** We retrospectively reviewed charts of all patients with a diagnosis of uveitic or steroid induced glaucoma at Washington University at St. Louis. Included patients were those with uveitis or steroid use prior to glaucoma onset, a primary tube shunt or trabeculectomy surgery, and  $\geq 3$  months follow-up after surgery. Cox regression model and Kaplan Meier survival analysis were conducted to determine risk of surgical failure with respect to time in the tube vs. trabeculectomy groups. Surgical failure was defined as IOP  $> 21$  mmHg at  $>2$  consecutive post-operative visits, any additional glaucoma procedures, loss of light perception, and complications secondary to hypotony. Covariates included were age, race, gender, pre-operative IOP, pre-operative number of glaucoma medications, perioperative use of steroids or systemic immunosuppressants, anterior segment involving uveitis, and combined surgery with cataract extraction.

**Results:** Of the 509 patient charts reviewed, 58 eyes of 42 patients (mean age of 55 years) met inclusion criteria. Median follow-up time was 85.0 months (5.8 - 200.6 months). There were 30 cases of tube shunts (53%) (16 Ahmed, 14 Baerveldt) and 28 cases of trabeculectomy with mitomycin (47%) (2 with Ex-Press shunts). The two most common etiologies of ocular inflammation were idiopathic (33, 55.9%), followed by sarcoidosis (12, 20.3%). Demographics and pre- and post-operative variables are displayed in Table 1. After controlling for covariates with  $p < 0.1$  (anterior involving uveitis, combined surgery, and race), tube shunts trended towards a 44.4% lower risk of surgical failure (HR: 0.56 95% CI: 0.21 to 1.49) and had a lower sustained risk of time to failure compared to the trabeculectomy group (Figure 1).

**Conclusions:** Tube shunt surgeries may have a lower risk of surgical failure compared to trabeculectomy surgery in patients with

glaucoma associated with ocular inflammation.

	Tube Shunt (n = 30)	Trabeculectomy (n = 28)	p value
Mean age (years)	56.3	53.5	0.51
Female gender (n, %)	27 (90.0%)	20 (71.4%)	0.10
African American Race (n, %)	20 (66.7%)	10 (35.7%)	0.03*
Right eye (n, %)	15 (50%)	15 (53.6%)	0.80
Mean pre-op IOP (mmHg)	32.4	32.2	0.95
Mean post-op IOP (mmHg)	14.0	13.0	0.44
Mean # pre-op medications	3.37	3.04	0.18
Mean # post-op medications	1.30	0.96	0.34

Table 1. Demographics and pre- and post-operative variables in tube shunt vs. trabeculectomy surgery groups. (Post-operative IOP was defined as mean IOP at 2 consecutive visits 1-year post-op; \*p < 0.05)

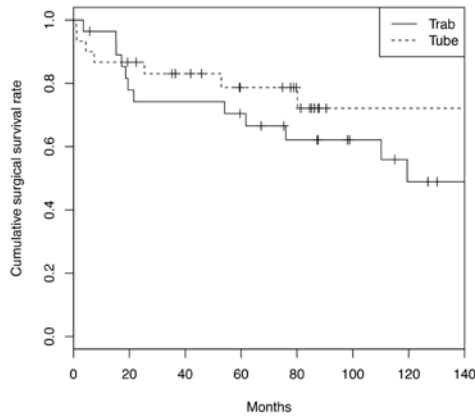


Figure 1. Kaplan-Meier survival curve showing the proportion of surgical survival in the tube shunt versus trabeculectomy groups.

**Commercial Relationship(s) Disclosure:**

Cecilia Lee: Commercial Relationship: Code N (No Commercial Relationship)

Aaron Lee: Commercial Relationship(s);Cogent 14 Productions LLC (threeplus.org):Code P (Patent)

Anjali Borade: Commercial Relationship: Code N (No Commercial Relationship)

Humeyra Karacal: Commercial Relationship: Code N (No Commercial Relationship)

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**Other Registry Site:**

**Registration Number:**