

INTERMEDIATE AND LONG TERM
OUTCOMES OF MMC-ENHANCED
TRABECULECTOMY AS A FIRST
PROCEDURE IN UVEITIC GLAUCOMA

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BACKGROUND

- ❖ Secondary glaucoma is one of the main complications of chronic uveitis & causes of visual loss

Moorthy et al Surv Ophthalm. 1997 ;41:361-394

- ❖ A wide range of glaucoma procedures have been utilized , when medical therapy fails , and trabeculectomy enhanced with antimetabolites is among those utilized more frequently

*Joshi et al 2002 ; survey of AGS practice preference of glaucoma surgery & antifibrotic use
Walland et al ; Cli Exp Ophthalmol. 2006*

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- ❖ Present literature on outcomes of MMCT for uveitic glaucoma includes studies with limited follow-up periods up to two years or small patients samples

Prata JA , Neves RA , Minckler DS , Mermoud A ,Heuer DK . Trabeculectomy with MMC in glaucoma associated with uveitis . Ophthalmic Surg 1994 ; 9 : 616-20

Jacobi PC , Dietlien TS , Krieglstein GK . Primary trabeculectomy in young adults long-term clinical results & factors influencing the outcome . Ophthalmic Surg Lasers 1999 ; 30 (8) 637-46

- ❖ Since uveitis is frequently a chronic disease , we were interested in evaluating longer term results and complications of this procedure when utilized as an initial surgery

PATIENTS & METHODS

- ❖ A retrospective chart review included 70 eyes of 50 patients with uveitic glaucoma who had undergone MMCT, at KKESH between 1992 & 2005 , with a minimal follow-up period of one year
- ❖ Patients were excluded if they had any previous glaucoma procedures in the study eye




Definitions:

Absolute Success:

- IOP between 6-21 mmHg without need for glaucoma medication at last follow-up
- Stable vision (no loss of 2 Snellen chart lines due to glaucoma progression or glaucoma surgery complications)
- No need for more glaucoma surgery

Qualified Success:

- same as above , but requiring the use of glaucoma medications to maintain an IOP below 21 mmHg

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- *Kaplan-Meyer survival curves were utilized for analysis of cumulative success rate*
 - *Failures that occurred after 3 years were labeled as late failures*

RESULTS

Mean age (SD) (years)

At time of surgery 29.9 (10.7)

Gender (patients)

Male 25 (35 eyes) (50%)

Female 25 (35 eyes) (50%)

Diagnosis

VKH 15

Fuchs iridocyclitis 11

Idiopathic 11

Behcet 5

Herpetic 2

Posner Schlossman 2

Ankylosing Spondylitis 1

JIA 1

Ocular TB 1

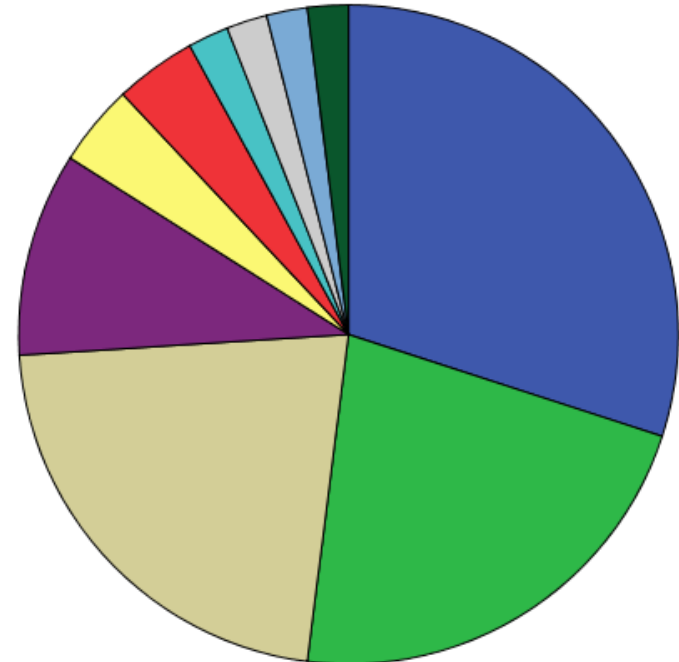
HLA-B27 1

Laterality

Unilateral 26 (19.4%)

Bilateral 34 (80.6%)

(20 (58.8 %) had bilateral surgery)



RESULTS

Mean follow-up (\pm SD) (years)

6.4 (\pm 3.4)

IOP

Preoperative 39.5 (\pm 8.8)

Postoperative 14.4 (\pm 7.8)

Medications

Preoperative 3.7 (\pm 0.7)

Postoperative 1 (\pm 1.3)

Status (eyes)

Absolute success 29 (41.4%)

Qualified success 16 (~~22.8%~~)

Failure 25 (35.7%)

(Late failure) 10 (14.2%)

(4 eyes failed after 5 years)

Significant VA change 9 (13%)

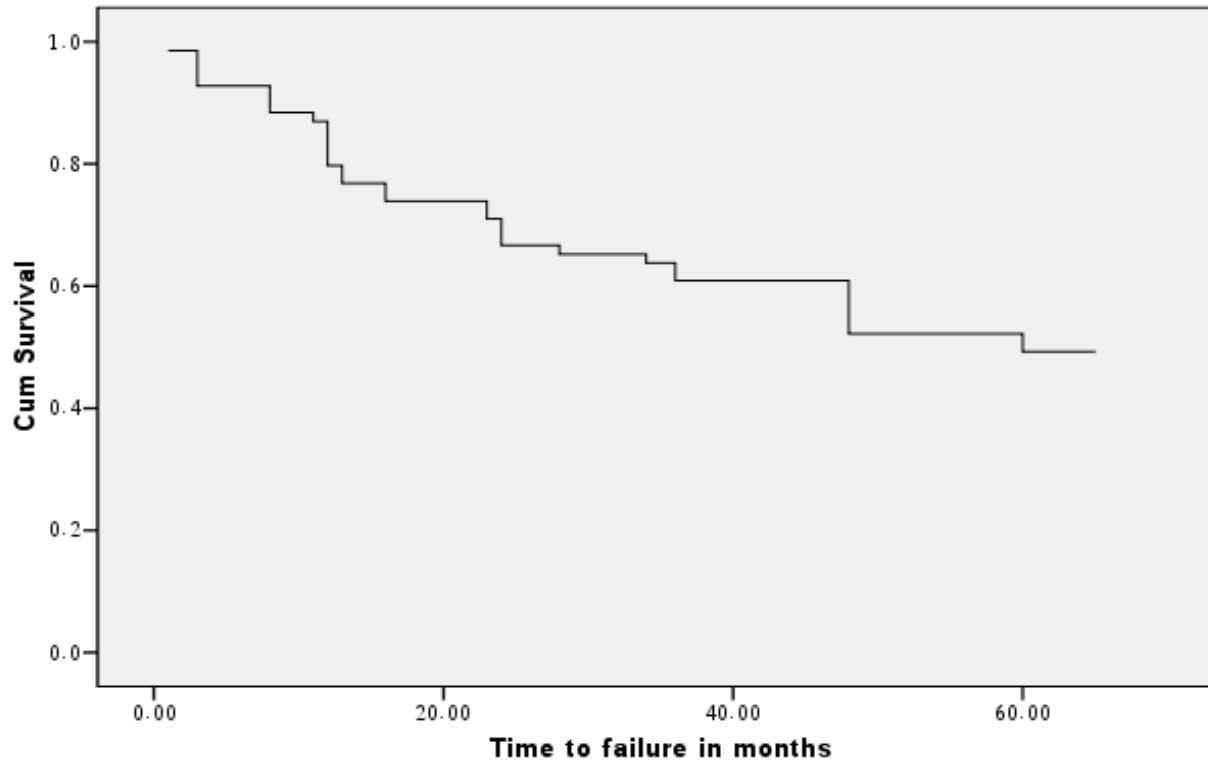
(4 eyes (6%) ended in absolute glaucoma)

Out of 64 phakic eyes

27 eyes (42.1%) underwent cataract surgery during the follow-up

RESULTS

Survival Function



The cumulative probability of success :

79.7% at one year

60.9% at 3 years

49.3% at 5 years

RESULTS

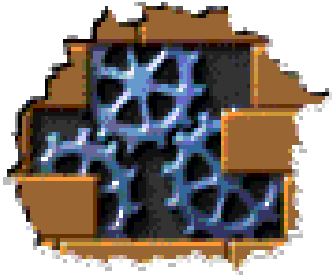
REPEAT GLAUCOMA SURGERIES

NUMBER OF REPEAT SURGERY	MMCT WITHOUT/WITH CE	SETON	CYCLOABLATION	PERCENTAGE
1st	6/4	3	4	24.3%
2nd	0	6	2	11.43%
3rd	0	0	3	4.3%



DISCUSSION

- ❖ The three most frequent etiologies of uveitis, among this sample of patients requiring glaucoma surgery, were VKH (21.4%), Idiopathic and Fuchs Heterochromic iridocyclitis (15.7% each). Among patients with bilateral uveitis, bilateral glaucoma surgery was required in almost two thirds



DISCUSSION

- ❖ Success of MMCT, as a primary procedure, was good at one year but decreased significantly at year two and further more at five years.
- ❖ In spite of utilizing mitomycin-C as surgery adjuvant, 36% of the cases had failed at last follow-up with one fourth of cases undergoing repeat glaucoma surgery.
- ❖ Potential risk factors for surgery failure in this type of population are recurrent inflammation and a younger age with presumably more active wound healing mechanisms



DISCUSSION

- ❖ Refractory glaucoma, to medical and repeat surgical treatment, was responsible for significant loss of vision in 13% of eyes and complete blindness in four eyes
- ❖ Cataract surgery was commonly required after trabeculectomy (more than 40%). This could be attributed not only to a well known side effect of trabeculectomy but to other uveitis predisposing factors such as frequent use of steroids and repeat episodes of inflammation



DISCUSSION

- ❖ In spite of high percentage of failures, after long term follow-up, 6 out of ten patients still had well controlled IOP with or without the use of glaucoma medications and maintained similar visual acuity to pre-operative levels.
- ❖ Late failures, after three years of absolute or qualified success, occurred in 14% of eyes

CONCLUSION

- ❖ Although MMCT offers a reasonable choice as first procedure in patients with uveitic glaucoma , in terms of long-term IOP control and low percentage of catastrophic complications, cases of failure after two years of initial success are frequent and continue occurring afterwards.
- ❖ Patients with bilateral uveitis requiring glaucoma surgery in one eye, frequently need surgical glaucoma intervention for the fellow eye.
- ❖ Phakic patients with uveitic glaucoma that undergo MMCT, frequently develop significant cataracts which require surgery.

CONCLUSION

- ❖ During the period of time of our study, even after failure with MMCT the preferred second surgery in uveitic glaucoma was another MMCT which was combined with cataract extraction in some cases.
- ❖ Uncontrolled glaucoma in uveitic patients, still represents an important factor of visual loss, even after MMCT surgery. Since late failure occurs, continued monitorization of IOP control and optic nerve status in addition to treatment of their uveitic condition is necessary.



Thank you