MACULAR EDEMA AFTER CATARACT SURGERY IN EYES WITH PREVIOUS MACULAR SURGERY

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Summary Slide

- Prevalence of patients with CME after cataract surgery in eyes that have undergone MPS/MHS is 9.1% in our study
- CME develops more frequently after CE in eyes that have undergone MP vs. MH surgery
- Development of CME is not dependent on timing of cataract surgery

Background

Macular hole surgery (MHS) and macular pucker surgery (MPS) in phakic eyes greatly increase risk for cataract formation

Cystoid macular edema (CME) is a known complication of cataract surgery

Prevalence and impact of pseudophakic CME in eyes with previous MHS and MPS are largely unknown

Background

Authors	MH or MP	No. of patients	Type of PPV	SD-OCT	Rate of CME
Dugas et al. (2010)	MP	65	20-g PPV	No	1.5%
Mylonas et al. (2013)	MP	20	23-g PPV	Yes	26%
Haritoglou et al. (2001)	MH	52	20-g PPV	No	3.8%
Bhatnagar et al. (2007)	MH	86	20-g PPV	No	9.3%
Passenard et al. (2010)	MH	53	20-g PPV	No	9.4%

Study Design

- **Purpose**: To determine the prevalence and risk factors for CME after cataract surgery in eyes that previously have undergone macular surgery

- **Methods**: Retrospective consecutive interventional case series

Study Design

- **Inclusion criteria**
  - Eyes that underwent MPS and MHS and subsequent cataract surgery from 2016 to 2018
  - 23 or 25 gauge PPV by single retina practice

- **Exclusion criteria**
  - Pre-existing macular disease (AMD)
  - Previous PPV
  - Previous retinal detachment
  - Combined PPV/Cataract surgery
  - Follow up < 3 months

Study Design

- **Primary outcomes measure**
  - Prevalence of CME
- **Secondary outcomes measures**
  - Visual outcomes
  - Risk factors associated with CME

- Cystoid macular edema defined as:
  - Cystic changes noted on Spectral Domain Optical Coherence Tomogaphy (SD-OCT)
  - Increase in central macular thickness (CMT) of 20 microns or more

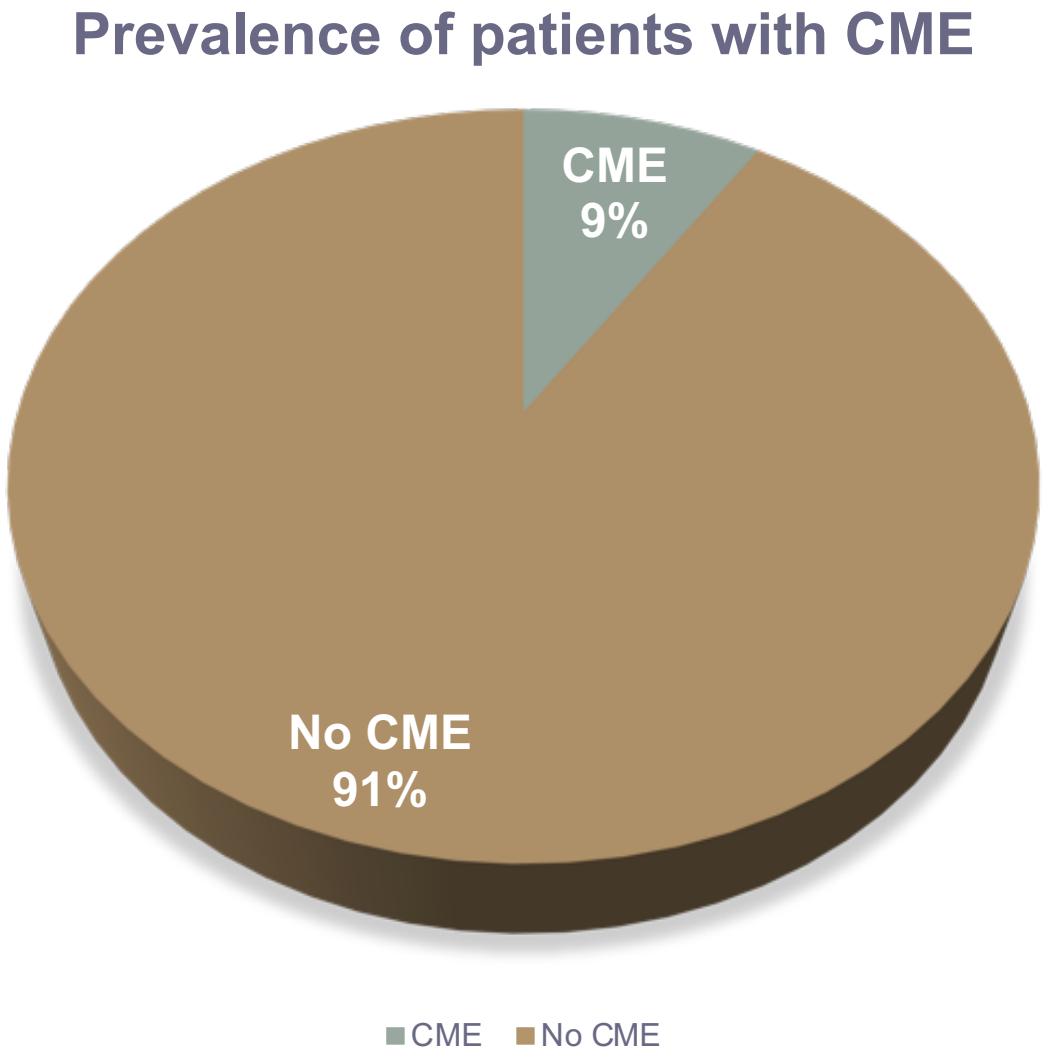
Baseline Demographics

	Edema	No Edema
Total number of eyes	22	221
Mean age (years)	65.7 +/- 4.7	65.3 +/- 6.2
Number of females (%)	77.3%	67%
Mean LOGMAR BCVA (Snellen equivalent)	0.58 (20/80)	0.54 (20/70)
Mean central macular thickness (microns)	474.8	442.7

Results

- 243 eyes met inclusion criteria
  - 135 with macular pucker (MP)
  - 96 with full thickness macular hole (FTMH)
  - 12 with lamellar macular hole (LMH)

- Prevalence of patients with CME: 9.1%



Results

	Eyes with CME	Eyes without CME
Mean time from macular surgery to cataract surgery	273 days	289 days (p=0.67)
Increase in central macular thickness	96 microns	3.7 microns (p=0.0001)
Final visual acuity	20/40	20/30 (p=0.101)

Results

- 22 patients with CME
  - 17 had surgery for MP
  - 5 had surgery for FTMH/LMH
- 221 patients without CME
  - 118 had surgery for MP
  - 103 had surgery for FTMH/LMH

- Compared to patients with macular hole (FTMH or LMH), **patients with macular pucker were more likely to to develop post-cataract surgery CME**
  - Odds ratio = 2.97
  - p=0.031(Chi square test)

Conclusions

Prevalence of patients with CME after cataract surgery in eyes that have undergone MPS/MHS is 9.1%

CME develops more frequently after CE in eyes that have undergone MP vs. MH surgery

Development of CME is not dependent on timing of cataract surgery

No statistically significant difference in final visual outcomes in eyes with and without CME

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