

Amputation of Visually Significant Detached Descemet's Membrane Flap After Cataract Surgery Alternative Approach to Complicated Problem

**Kristin Ow Chapman, MD and Priyanka Sood, MD
Weill Cornell Medical Center
New York, New York
Poster #7528**

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Descemet's Detachments

- Incidence has been reported to be at rates of 2.5% for extracapsular cataract extractions and up to 0.5% in phacoemulsification
 - Descemet's membrane detachments (DMD's) can cause significant post operative edema
 - Several post operative methods of treatment have been proposed
 - Observation
 - Suturing the detachment
 - Injection of gas or air in the anterior chamber
 - Corneal Transplant (Partial or Full thickness)
- Chow, et al. *Current Opinion Ophthalmology* 2013;24(4):356-361.
 - Kim, et al. *Yonsei Medical Journal* 2005; 46(5):719-723.
 - Shalchi, et al. *JAMA Ophthalmology* 2013;131(4):533-535.



Purpose

- To report the methods and outcome of 2 cases of amputation of a detached flap of Descemet's membrane following cataract surgery as an alternative approach for treatment of a visually significant central corneal Descemet's detachment.



Case #1

CC: blurry vision

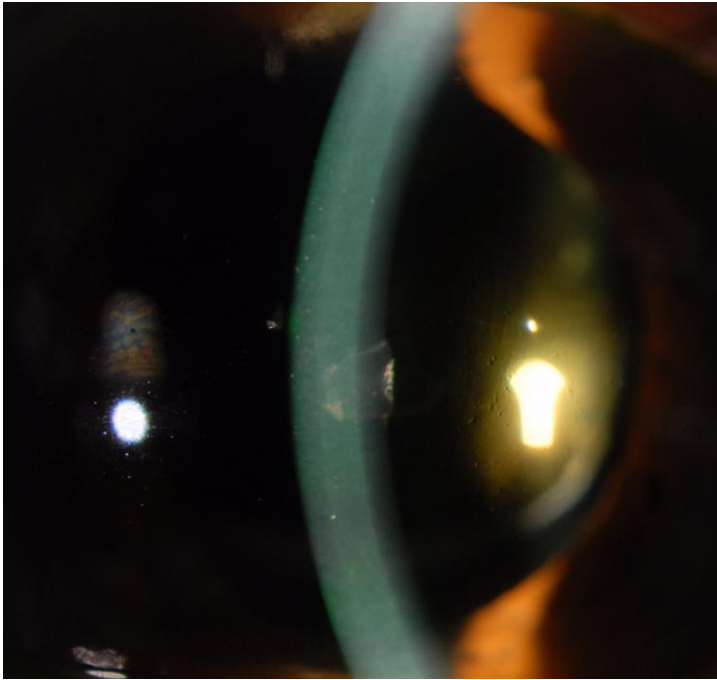
HPI: 68 year old man presented with blurry vision since his cataract surgery at an outside hospital. He denied any pain, flashes, floaters or veils of vision loss.

Ocular History	Cataract surgery OD 6 months prior to presentation
Medical History	None
Medications	Prednisolone 1% BID OD and bromfenac qHs OD
Family History	No history of blindness, glaucoma, corneal transplant

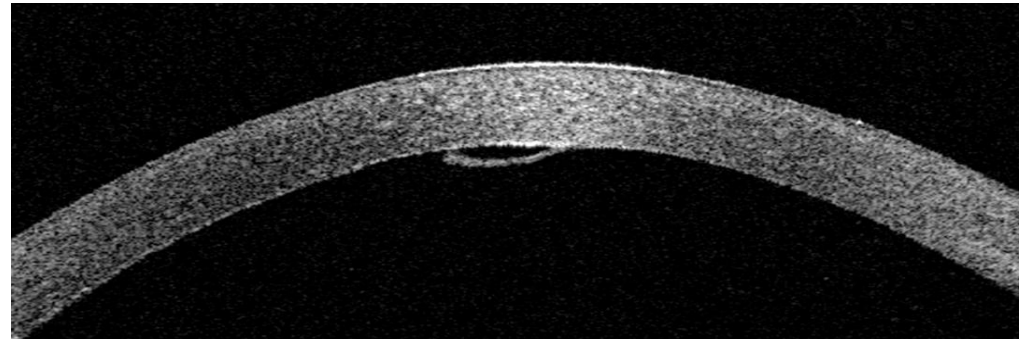
	Right Eye	Left Eye
Visual acuity (cc)	20/50	20/25
Anterior segment	Central Descemet's detachment with endothelial pigment and without overlying microcystic corneal edema	No guttae
Posterior Segment	Normal	Normal
Corneal Thickness	612 um	604 um



Images Case #1



Slit lamp photograph of central
Descemet's detachment OD



Anterior Segment Visante Ocular
Coherence Tomography (OCT)
demonstrating Descemet's detachment



Case #2

CC: cloudy vision

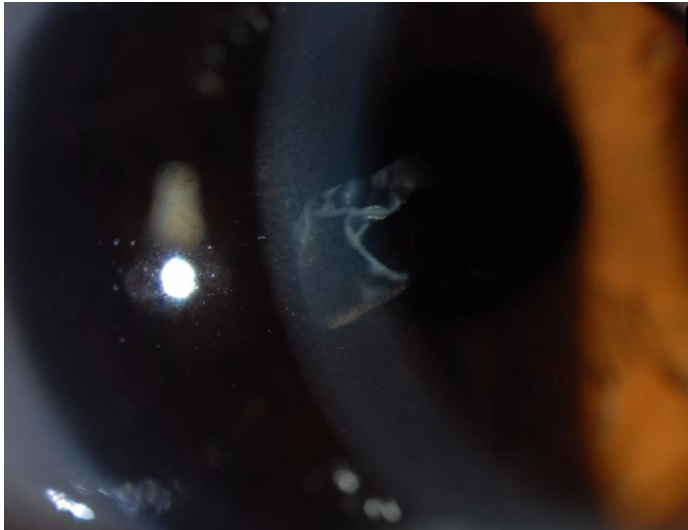
HPI: 71 year old female complains of clouding vision in the right eye. She denied flashes, floaters or veils of vision loss. She was on tobradex BID OU for treatment of lower lid chalazia.

Ocular History	Cataract surgery OD 5 months prior to presentation
Medical History	Hypertension, Breast cancer s/p chemotherapy and radiation
Medications	Tobradex BID OU
Family History	No history of blindness, glaucoma, corneal transplant

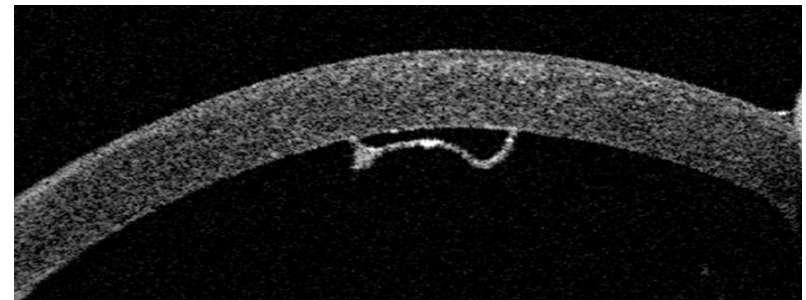
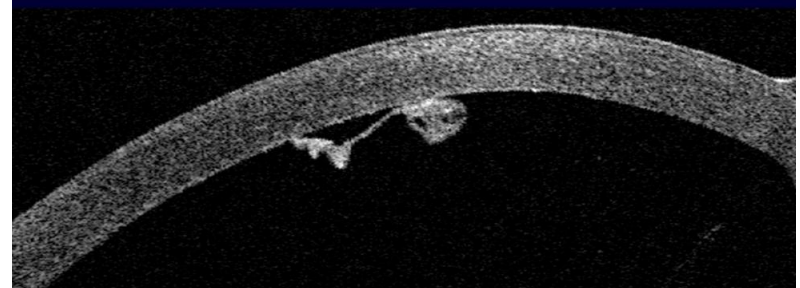
	Right Eye	Left Eye
Visual acuity (cc)	20/30	20/25
Anterior segment	Central Descemet's detachment scrolled with pigment clumps, MIOL-3 piece in sulcus with posterior capsule opening	No guttae
Posterior Segment	Normal	Normal
Corneal Thickness	612 um	604 um



Images Case #2



Slit lamp photograph of central
Descemet's detachment OD



Anterior Segment Visante Ocular
Coherence Tomography (OCT)
demonstrating Descemet's detachment



Treatment: Surgical amputation of detachment

- The procedure involved a paracentesis, injection of healon and a wound at 6:30 with a 2.75 keratome blade.
- Reverse uttratas were used to slowly remove the Descemet's tag.
- In one case a reverse cystotome was used to score the attached edge of the detachment.
- Simcoe cannula was used to remove the healon.
- Wounds were hydrated and found to be water tight.
- Post operative: moxifloxacin and sulfacetamide and prednisolone were administered



Discussion

- Amputation was selected because of
 - Adequate endothelial counts and no significant edema
 - Central location of flap in visual axis
 - Associated pigmentation of flap
 - Significant visual symptoms
 - Failure of medical management

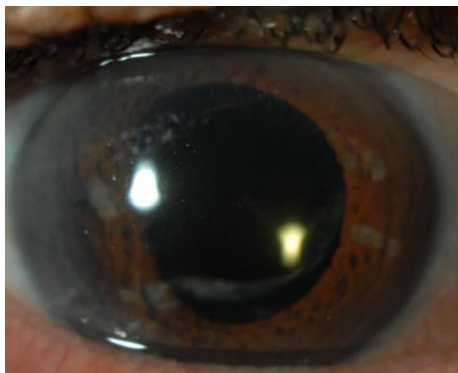


Post Operative Course

Case #1

	POD #1	POM #1	POM #5
BCVA	20/40	20/30	20/30
Anterior segment	Absent tag, reduced corneal edema	No edema	No edema

- Treatment:
 - Gatifloxacin QID OD for 10 days
 - Bromfenac daily OD for 3 weeks
 - Difluprednate QID OD for one week then tapered down over one month

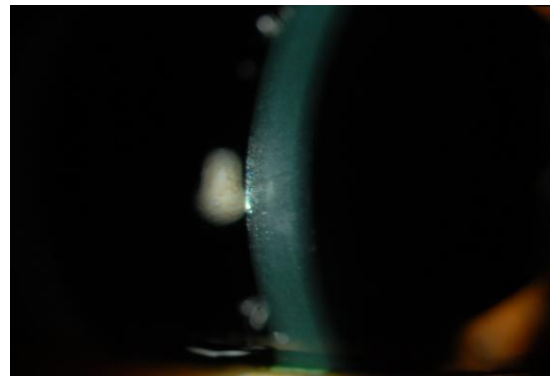


POM #3 Slit lamp photo with no corneal edema OD

Case #2

	POD #1	POM #1	POM #5
BCVA	20/70	20/60	20/30
Anterior segment	Absent tag, 1-2+ Descemet's folds	No edema	No edema

- Treatment:
 - Vigamox QID OD for 10 days
 - Bromfenac daily OD for 3 weeks
 - Difluprednate QID OD for one week then tapered down over one month



POM #2 Slit lamp photo with no corneal edema OD

Summary

- Surgical amputation of a centrally located, dislocated flap of Descemet's membrane is an acceptable and useful approach to management of visually significant Descemet's membrane detachment
- The patient should have evidence of adequate endothelial function with normal corneal thickness and endothelial cell count



References

- Chow VWS, Agarwal T, Vajpayee R, Jhanji V. Update on diagnosis and management of Descemet's membrane detachment. *Current Opinion Ophthalmology* 2013;24(4):356-361.
- Kim IS, Shin JC, Im CY, Kim EK. Three cases of Descemet's membrane detachment after cataract surgery. *Yonsei Medical Journal* 2005; 46(5):719-723.
- Shalchi, Z, O'Brart DPS, Ilari L. Bilateral Descemet membrane detachment following cataract surgery. *JAMA Ophthalmology* 2013;131(4):533-535.

