





Coexisting Cataract with Glaucoma & Role of Phacotrabeculectomy

Dr Mudit Agrawal

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- *Glaucoma and cataract often occur together ,especially in elderly and each condition can influence management of the other.*
 - *Progressive lens change can mimic progressive visual field loss,reduce visual acuity and narrow the drainage angle.*
 - *Glaucoma medications that cause miosis can aggravate visual impairment from cataract.*



Practical difficulty

- In coexisting conditions ,it is often hard to discern how much glaucoma is contributing to the reduced visual acuity and how much improvement in vision you can assure to the patient
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Approaches that can be considered

- ▮ *1.) Cataract extraction alone*
- ▮ *2.) Filtering Surgery alone*
- ▮ *3.) combined cataract and Glaucoma Surgery*





EFFECT OF CATARACT EXTRACTION ON IOP


- *IOP tends to decrease in long term after phacoemulsification and the range could be from 2 to 4 mm Hg*
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UNDER FOLLOWING CIRCUMSTANCES PHACO SURGERY CAN BE PERFORMED ALONE

- ▢ *If the primary problem is visually significant cataract*
- ▢ *Whose glaucoma is considered mild-*
 - A) Appearance of disc and visual field loss is not extensive*
 - B) Whose IOP or target IOP is reached with minimal medications(1or2)*
 - C) The patient is compliant to the therapy and topical medications*


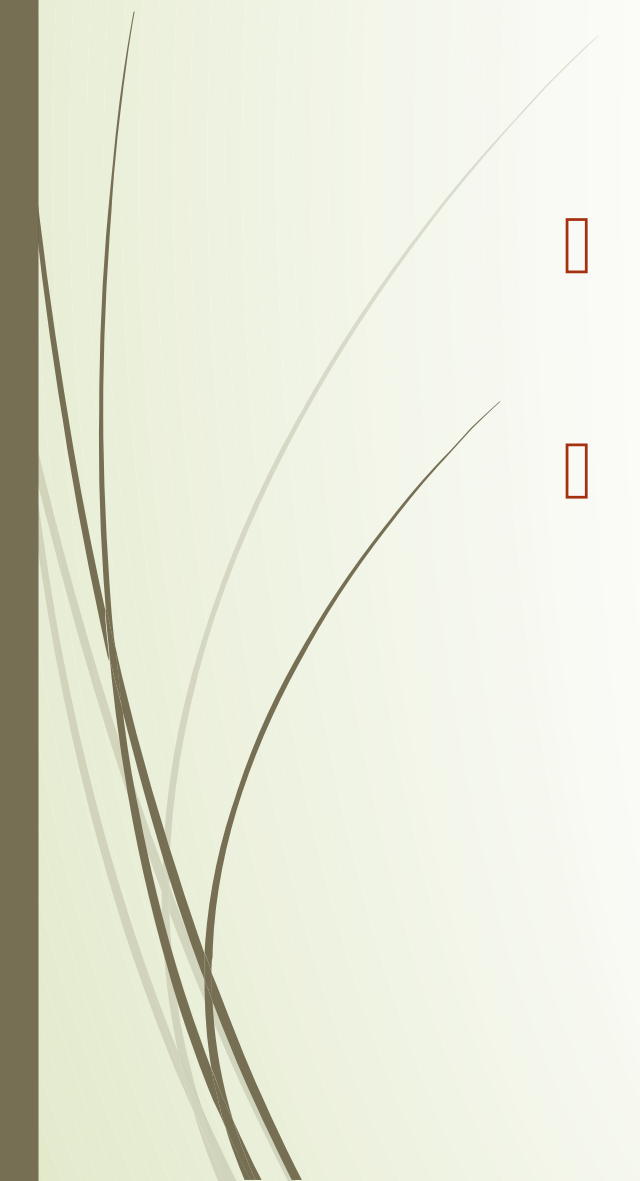
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- *The patient is having PACG rather than POAG and gonioscopy shows open angle in greater than 1 quadrant or having intermittent PAS*
 - *Doing Yag PI gets encouraging results, lowering the initial IOP*
 - *The mechanism of angle closure is related to anteriorly positioned crystalline lens and small/crowding of anterior chamber*

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- *The major concern with this option is the possibility of IOP spike in post operative period,so the IOP should be closely monitored*



Some facts which encourages us to go for combined surgery

- *Increased risk of nuclear sclerosis related to elevated IOP*
- *Glaucoma surgery subsequently increases the risk for cataract or its progression*
- *In cataracts (especially posterior sub capsular) where field charting or Nerve fibre analysis becomes difficult*

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- ▮ *Glaucoma medications themselves may also increase the risk of cataracts*
 - ▮ *Dangerous IOP spikes may occur in glaucoma patient even after uncomplicated phaco surgery*




In the following points combined procedure should be considered

- ▢ *A) A patient with visually significant cataract who cannot afford an IOP spike.*
- ▢ *B) Is on more than two topical medications*
- ▢ *C) Is intolerant to current medications.*



□ D) Is having trouble complying with the recommended drop regimen.

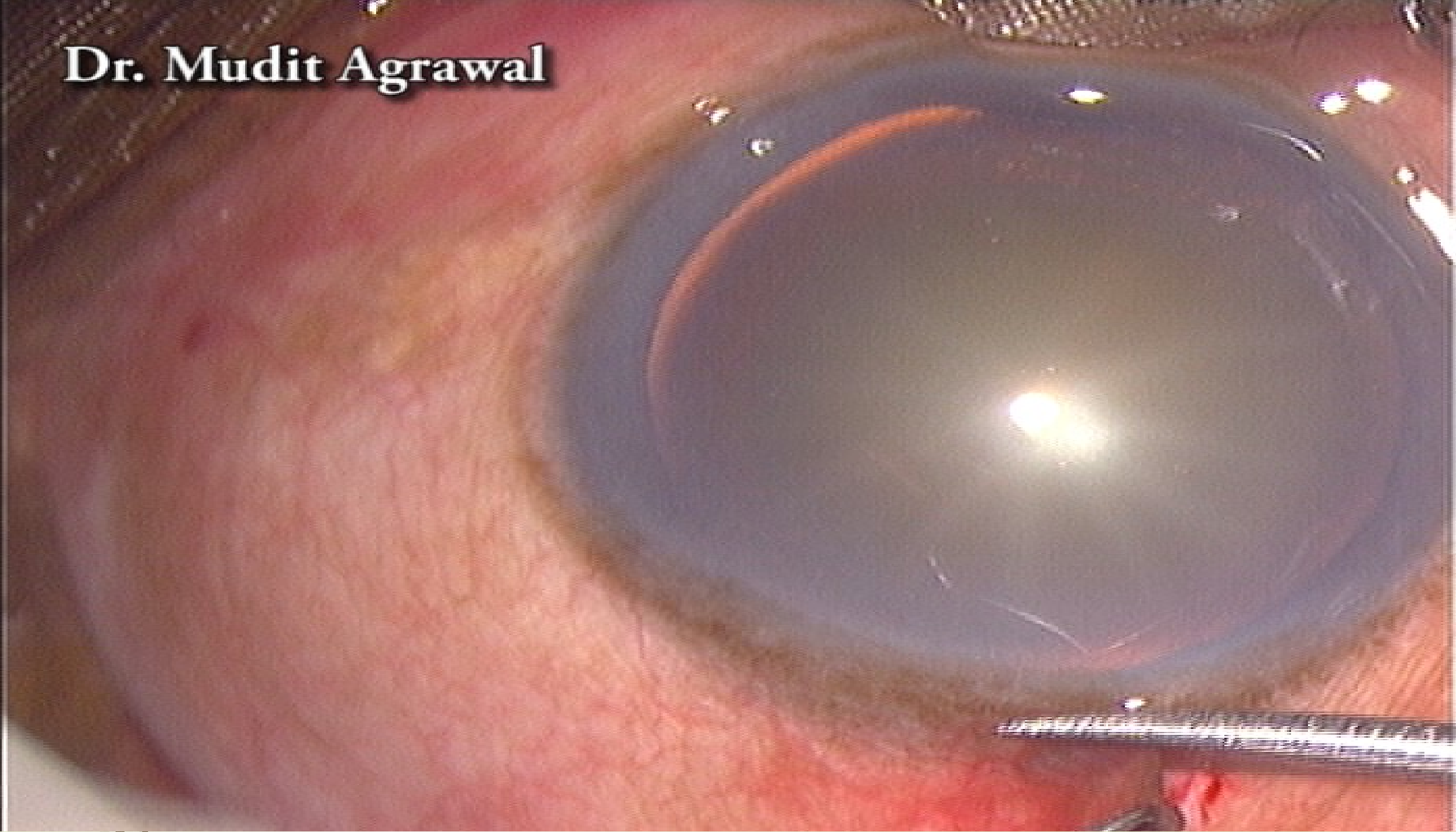
□ E) For whom a second trip to the operating room is extremely difficult medically, socially, or economically



PREOPERATIVE MEASURES

- *It is useful to stop any miotics several days before surgery, both to reduce postoperative inflammation and to allow maximum dilatation for cataract surgery.*
- *Other topical glaucoma medications such as brimonidine when applied immediately preoperatively may cause conjunctival vasoconstriction and thus enhance haemostasis.*

Dr. Mudit Agrawal








ONE SITE VERSUS TWO SITE APPROACH


- *In two site approach trauma to operative tissue is minimised*
- *Easy to do via 2 site approach*
- *Two site approach takes longer time*
- *Astigmatism can be more in two site approach*



COMPLICATIONS

- *Hypotony, hyphema, shallow AC are the common complications.*
 - *In single eyed patient decision should be carefully evaluated.*
 - *Any PCR with vitreous prolapse will hamper the required result.*
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- *Vitreous may block the window. Thus in very hard cataracts coexisting glaucoma separate surgery should be considered or manual PHACO fracture with trab is also another option(SICS+ trab)*



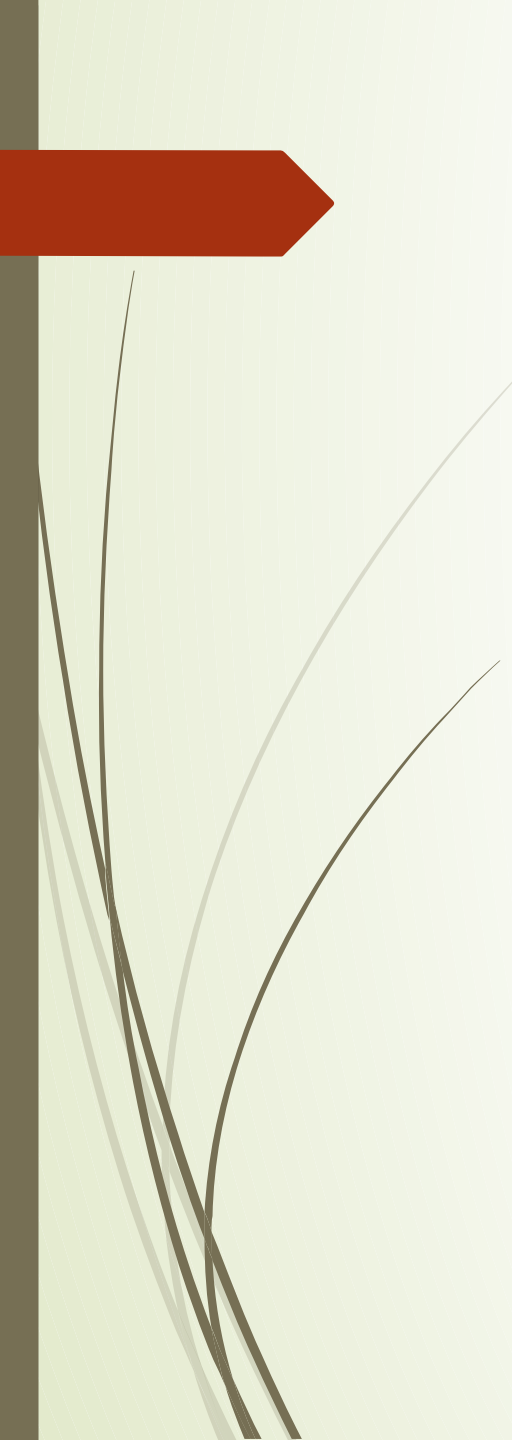
Sequential Procedure: Trabeculectomy followed by Cataract Sx

- ▮ *Trabeculectomy followed by cataract surgery is considered for situations in which the state of the Glaucoma dominates the clinical picture*
- ▮ *Strategy with these patients is to treat the vision threatening condition first and achieve IOP levels low enough to protect an already compromised optic nerve.*



Concerns related to sequential surgery include

- ▢ the need for two separate surgical procedures and*
- ▢ the possibility that filtration(trab) surgery might hasten cataract development and*
- ▢ that cataract surgery afterwards might have an adverse effect on filtering bleb.*





Multiple studies have shown that there were no statistical significant difference in final IOP, but we should do the surgeries separately if glaucoma is bad and needs large window as the rate of complications is lower in individual procedure.


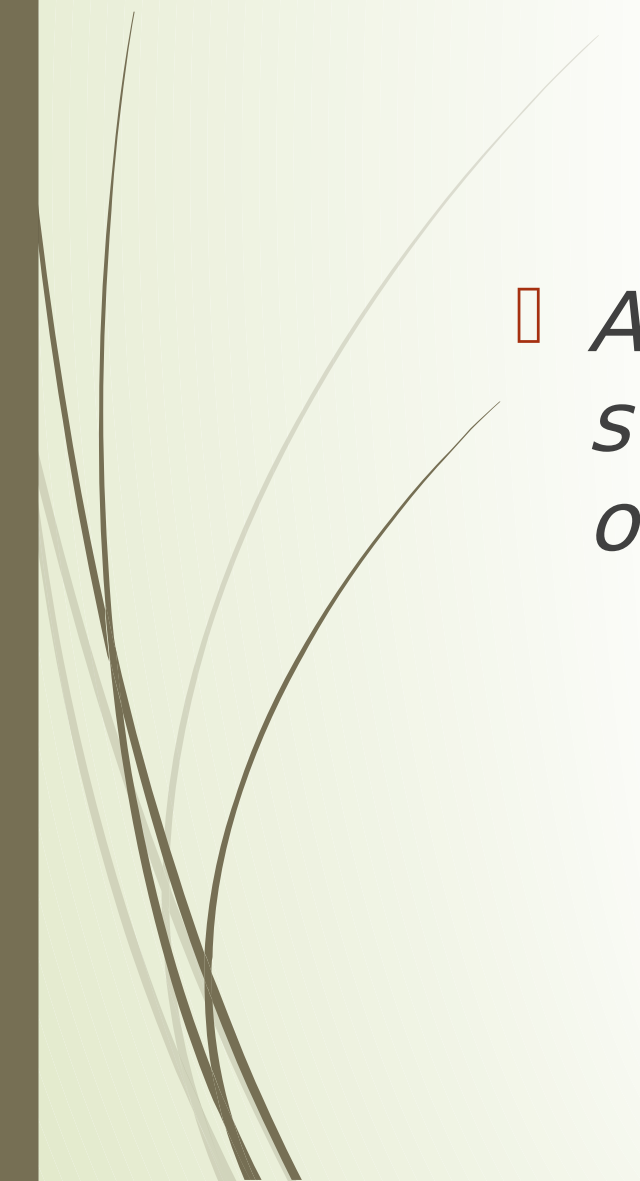
One eyed patient.


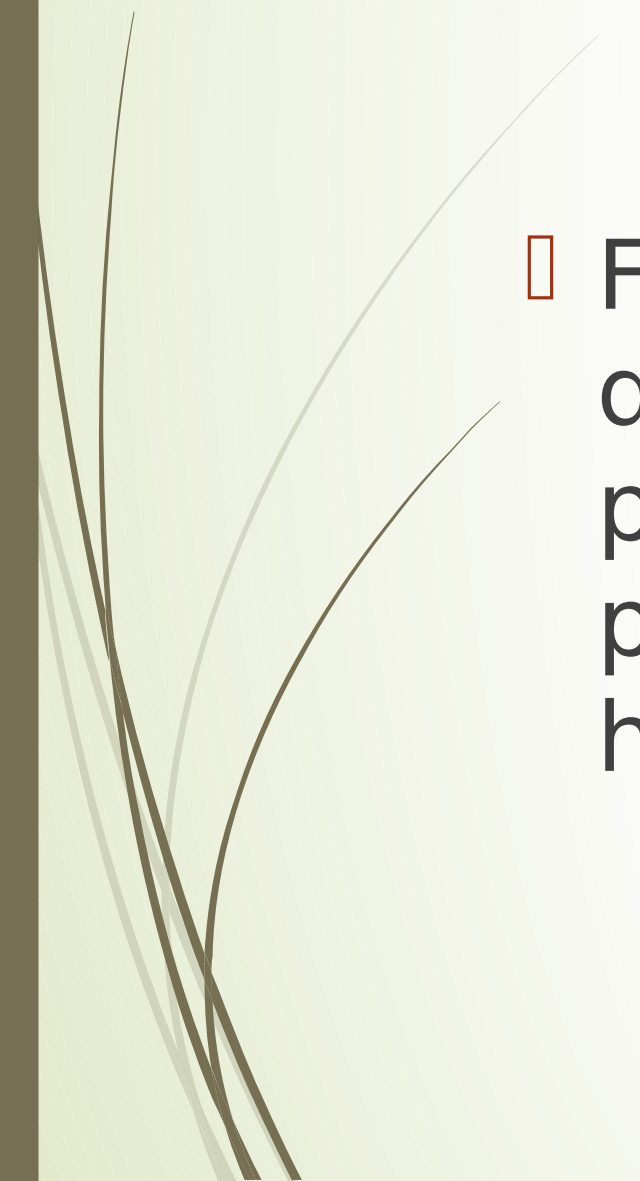


CATARACT SX IN PRESENCE OF FILTERATION BLEB (previously done Glaucoma Sx)

- ▮ *Cataract surgery in patients with a filtration bleb should be approached with special care and abundance of caution.*
- ▮ *Inadvertent trauma to the bleb may lead to bleb leaks, and postoperative inflammation can induce bleb failure.*

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- ▮ *Temporal clear corneal incision to minimise the risk of trauma to the blebs*
 - ▮ *During phacoemulsification the bottle height and fluids should be managed appropriately to avoid intraoperative hypotony and collapse of bleb, and also bleb leakage*

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- *At the conclusion of the case, recommend suturing the main wound to avoid any risk of postoperative leaks.*

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- Finally surgeon must determine and decide the visual need, visual potential and the patients overall physical as well as economical health before planning the Surgery



□ Thank you