



Blockage of Glaucoma Filtration Device by Microlens Particles After Cataract Surgery

Presenting Author:

Dr. Ashokkumar P. Shroff, MD

Co-Authors:

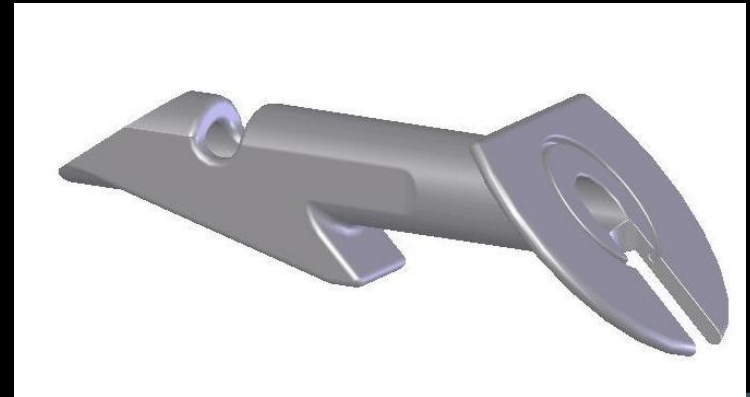
Dr. Hardik A. Shroff, MD

Dr. Dishita H. Shroff, MD

SHROFF EYE HOSPITAL

Navsari – India.

Email: sehnavsari@yahoo.co.in



**We do not have any financial interest
in this presentation...**



We had one patient

- ▶ Female, 36 years, having pigmentary glaucoma in LE
- ▶ H/o antiglaucoma surgery done before 7 months back (UNQ)
- ▶ Best Corrected Vision
 - RE: 20/20
 - LE: 20/200
- ▶ IOP
 - RE: 15 mm of Hg
 - LE: 40 mm of Hg
- ▶ SLE (LE)
 - Corneal oedema ++
 - AC ++
 - NS +++
 - Glaucomatous disc
 - Flat Bleb at 11 o'clock limbus
- ▶ Treatment
 - Combigen eye drops – BID in left eye
 - Travatan eye drops – HS in left eye

Introduction



Ex-PRESS implant

- ▶ Trabeculectomy is the most popular procedure
- ▶ However it has disadvantages like
 - **Standardization – not possible**
 - **Complications can occur like Hypotony, Choroidal detachment, Bleb leak, Bleb infection, Cystic bleb, Endophthalmitis etc.**
- ▶ Our experience with Ex-PRESS implant – Good (Paper presented at ASCRS 2013)
 - **Ex-PRESS implants remained in position in all cases**
 - **IOP remained control between 13 to 19 mm of Hg**
 - **Vision same as pre op**
 - **Bleb good in all eyes except flat in one eye**



Our Concern

- ▶ Patient was already operated for AGS
- ▶ Uncontrolled IOP even with medication
- ▶ Advance nuclear sclerosis
- ▶ Our experience – good with phaco + trab. + IOL
 - **But, AGS already done**
- ▶ We are also happy with Ex-PRESS implant

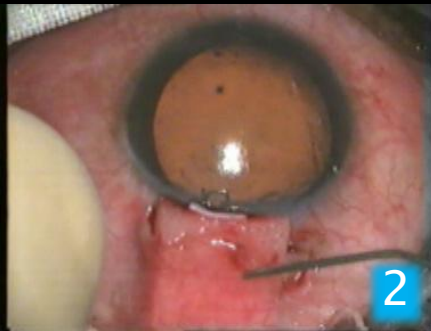
Therefore, We Planned

- ▶ Phaco with IOL with Ex-PRESS Implant in same sitting but at different site

Procedure



- ▶ Fornix base conjunctival flap and limbal base scleral flap reflected (1)
- ▶ Mitomycin applied (2)
- ▶ Phaco through wound at different site (3)
- ▶ IOL insertion (4)
- ▶ Ex-PRESS implant inserted (5)
- ▶ Conjunctiva closed (6)



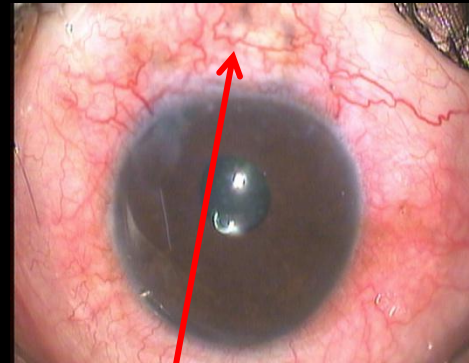


Observation

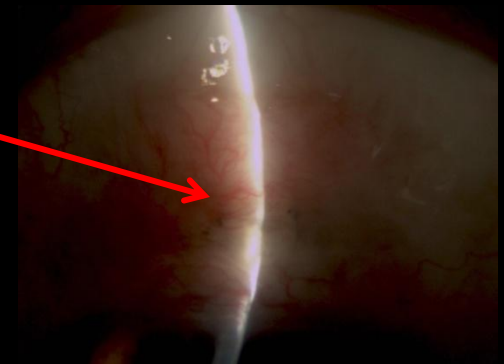
Post op – 1 month

- ▶ **IOP 36 mm of Hg**
 - **Poorly controlled with medicines**
- ▶ Flat bleb
- ▶ Ex-PRESS implant in situ
- ▶ Vision 20/200
- ▶ **Reason → implant tunnel was blocked by grey material**
- ▶ **Gonioscopy – confirmed it**

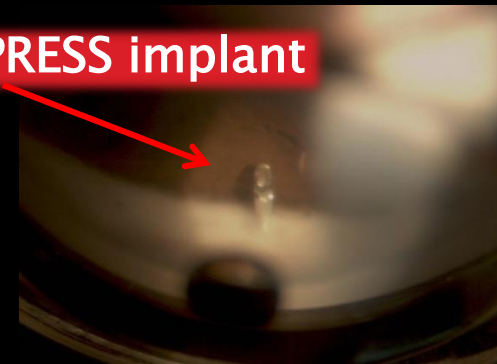
We thought that can only be due to micro lens particles separated during previous phaco surgery



Flat bleb



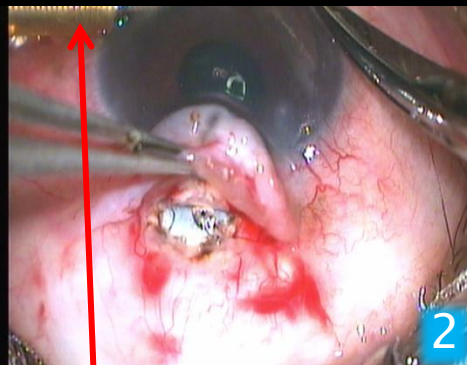
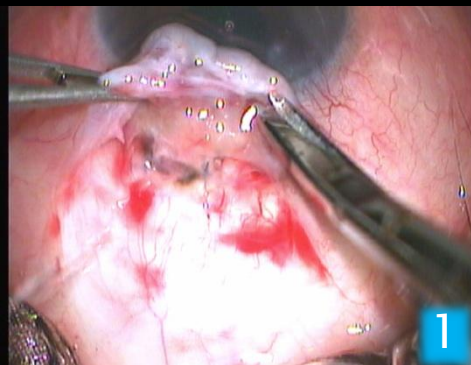
Ex-PRESS implant



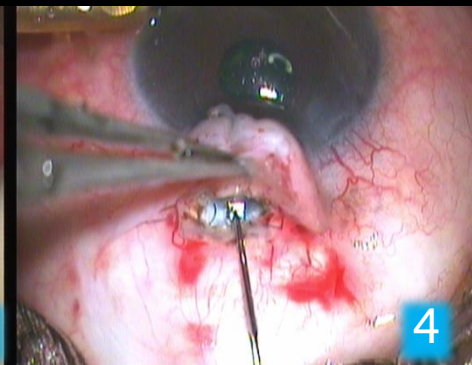
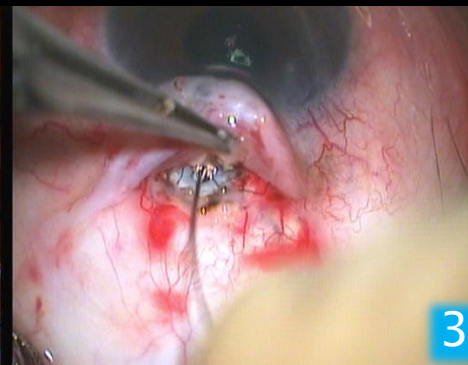
Gonioscopy view

Next Procedure

- ▶ We opened the previous surgical area (1)
- ▶ We checked the patency of implant by anterior chamber maintainer with BSS and Air (2)
- ▶ Implant was found blocked (2)
- ▶ Tried to open with Ultrathin wire through foot plate but could not succeed (3)
- ▶ Tried to push fluid – but could not do so (4)



ACM

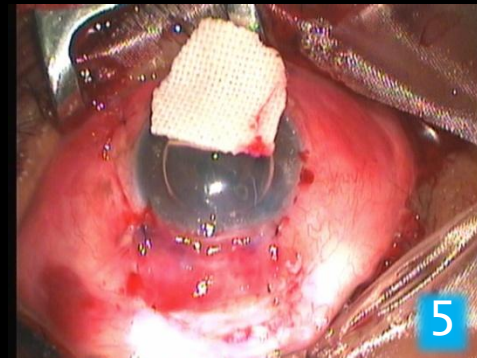
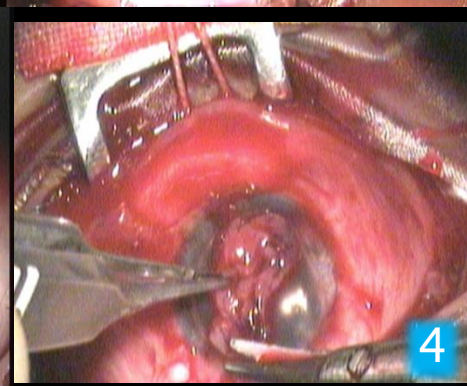
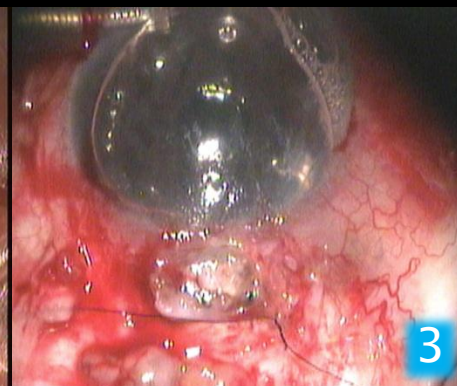
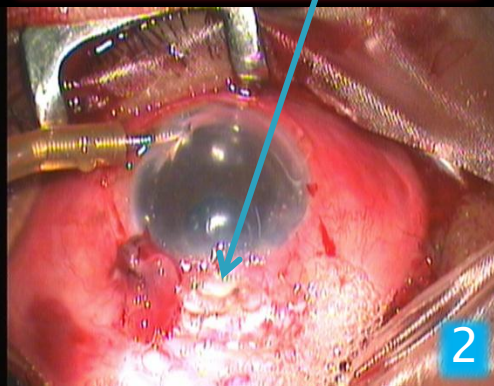
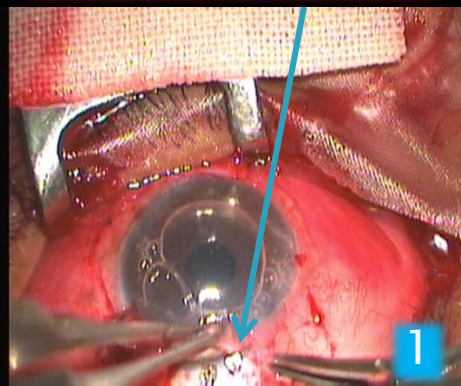


Next Procedure (cont..)

- ▶ Therefore, we inserted second implant through another site in the same scleral bad area (1)
- ▶ Air bubbles could be seen through implant (2)
- ▶ Scleral flaps were closed with sutures (3)
- ▶ Conjunctival autograft from lower bulbar conjunctiva was taken (4)
- ▶ And placed to cover the scleral flap (5)

2nd Ex-PRESS implant

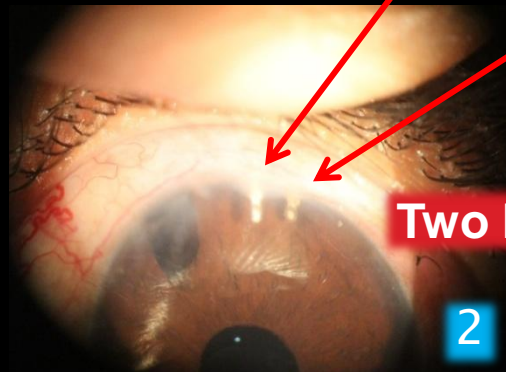
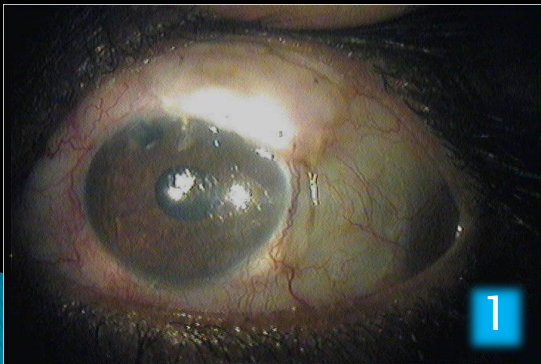
Air Bubbles over Implant



Post op. follow up (Month 1, 3 & 6)

LE

- ▶ Good bleb (1)
- ▶ AC +++
- ▶ IOL well centered
- ▶ IOP: 12 to 14 mm of Hg without any drugs
- ▶ Corrected vision: 20/30
- ▶ 2nd implant in situ (2, 3)



First

Second

Two Implants

These images are taken at 6 month post op

Review of Literature



- ▶ Comparison between Ex-PRESS & Trab
- ▶ 35 eyes each ; Average f/u – 28 months

	Trab	Ex-PRESS
Blebs		<ul style="list-style-type: none">• Less vascular• More diffuse upto 18M f/u then same• Height→ lower up to 3M f/u higher up to 6M f/u then same
IOP control		<ul style="list-style-type: none">• Slightly higher at base line• After 6M f/u – slightly higher IOP• Then same lowering (45% to 48%)
IOP control (Complete success)	74.29%	77.14%
Qualified success (Additional)	8.75%	5.71%
P value	Same	Same
Complications – Hypotony – Hyphema	5 cases 4 cases	2 cases One case (micro hyphema)
Post-op vision	8 times / 3 months	6 times / 3 months

Ref:

Assessment of Bleb Morphologic Features and Postoperative outcomes After Ex-PRESS Drainage Device Implantation Versus Trabeculectomy: TRAVIS J. GOOD AND MALIK Y. KAHOOK:AJO:Mar 11:507-514



Discussion

- ▶ Valves or implants give better IOP control following failed AGS
- ▶ Ex-PRESS implant newer technology
 - **Easy insertion**
 - **More stability**
 - **Better IOP control**
- ▶ Our experience is happy with Ex-PRESS implant
- ▶ This patient had
 - **Advance cataract with uncontrolled IOP**
- ▶ Phaco with IOL with Ex-PRESS implant was done in same sitting at different sites
- ▶ First implant was not removed as it would jeopardized 2nd implant and IOP control
- ▶ We did not realize
 - **Implant can be blocked by micro lens particles**
- ▶ We want to suggest
 - **First to do Phaco with IOL**
 - **Then Ex-PRESS implant at a later date**



Summary

- ▶ Female aged 36 yrs having nuclear sclerosis +++ with pigmentary glaucoma in LE
- ▶ Operated for AGS 7 months back
- ▶ Uncontrolled IOP even with medication
- ▶ Operated for phaco with IOL and Ex-PRESS implant for glaucoma at two different sites in same sitting
- ▶ Ex-PRESS implant got blocked probably due to micro lens particles
- ▶ As Ex-PRESS implant was found blocked on table, second implant was placed as per standard procedure
- ▶ Scleral flaps were covered with conjunctival autograft
- ▶ IOP well controlled even after 3 months with good functioning bleb

Thanks...!!