



Università degli Studi di Palermo
Facoltà di Medicina e Chirurgia
Dipartimento di Biomedicina Sperimentale e Neuroscienze Cliniche
Sezione di Oftalmologia
Responsabile: Prof. Gaetano Lodato



Nucleo del cristallino lussato in camera vitrea

Salvatore Cillino



Incidenza lussazione frammenti nucleari in CV

Cotlier e Rose	4%	Trans Am Ophth, 1976
Leaming, Pande e Dabbs	0,3%-1,1%	J C R S, 1995-6
Kageyama T, Ayaki M, Ogasawara M, et al	0,2%	BrJO, 2001

Sino al 1,5% nei chirurghi in training

TABLE 1. Complications From Retained Lens Fragments Following Phacoemulsification

Complication	Percentage
Vitreous opacification*	90%
Uveitis	57%
Glaucoma	52%
Corneal edema	45%
Retinal detachment	7%
Cystoid macular edema†	7%

*Visual acuity of 20/200 (20/60) or less

†Difficult to assess because of opaque media.

(Data from Gilliland et al. Retained intravitreal lens fragments after cataract surgery. Ophthalmology 99:1263, 1992)



TABLE 2. Indications for Surgery

Indications for Surgery

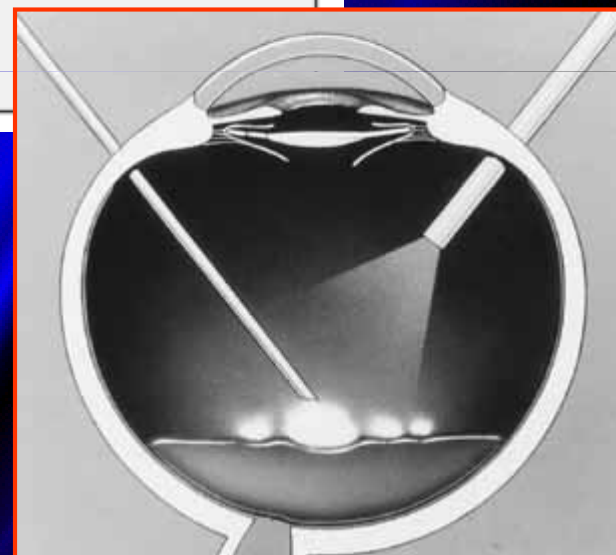
Poor visual acuity from lens particles or opaque vitreous

Uveitis (persistent)

Glaucoma

Corneal edema secondary to lens particles

Retinal detachment



Duane's Ophthalmology, 2009

Clinical Predictors and Outcomes of Pars Plana

TABLE 5. Multivariable Logistic Regression of Variables for Final Visual Acuities of Logarithm of the Minimum Angle of Resolution ≤ 0.30 and ≥ 1.00 in Patients who Underwent Pars Plana Vitrectomy for Retained Lens Material

LogMAR ≤ 0.30 (20/40 or better)	<i>P</i> value ^a	OR	95% CI	Effect ^b
Posterior chamber intraocular lens at cataract surgery	.005	3.251	1.44 to 7.35	Protects
Worse initial vision	.001	0.459	0.29 to 0.72	Harms
Preexisting eye disease	.001	—	—	
Preexisting eye disease excluding diabetic retinopathy	.001	0.219	0.9 to 0.53	Harms
Diabetic retinopathy	.005	0.167	0.05 to 0.58	Harms
LogMAR ≥ 1.00 (20/200 or worse)	<i>P</i> value ^a			
Anterior vitrectomy	.005	0.177	0.05 to 0.60	Protects
Development of glaucoma	.001	12.81	2.81 to 58.56	Harms
Preexisting eye disease	.02	4.224	1.25 to 14.27	Harms
Sulcus lens at cataract surgery	.011	0.212	0.06 to 0.70	Protects

CI = confidence interval; logMAR = logarithm of the minimum angle of resolution; OR = odds ratio.

^a*P* values by multivariable logistic regression adjusted for all multivariable significant factors included in a forward stepwise fashion.

^bDescribes the effect that a particular variable has on final visual acuity outcomes.

TABLE 7. Studies Reporting the Incidence of Glaucoma, Retinal Detachment, and Cystoid

TABLE 7. Studies Reporting the Incidence of Glaucoma, Retinal Detachment, and Cystoid Macular Edema for Patients who Underwent Pars Plana Vitrectomy After Complicated Cataract Extraction

Series (yr)	Number of Eyes	Glaucoma (%)	RD (%)	CME (%)	Chronic CME (%)
Gilliland ⁷ (1992)	56	25	14.3	NR	5
Current (2008)	166	8.4	3.6	9.6	1.8
Totals	2390	7.8	11.1	12.1	3.7

Stilma ¹¹ (1997)	63	NR	15.9	NR	NR
				22.2	3
				6.7	NR
				NR	NR
				NR	13.5
				9	NR
				11.8	NR
				31	19
				NR	NR
				0	NR

ARTICLE

Intraoperative retinal detachment prophylaxis in vitrectomy for retained cataract fragments

Robert E. Morris, MD, Jeffrey L. Shere, MD, C. Douglas Witherspoon, MD, Zachary K. Segal, MD, Linda Tehrani, Ferenc Kuhn, MD, PhD, Mathew Sapp, MD

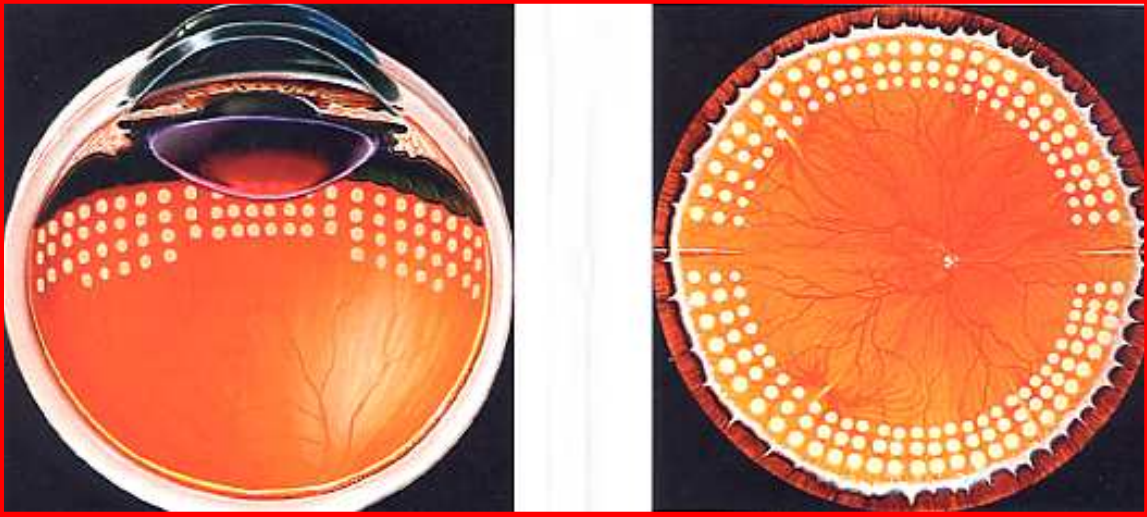
PURPOSE: To assess the safety and efficacy of intraoperative retinal detachment prophylaxis in vitrectomy for retained cataract fragments.

CONCLUSIONS: The incidence of RRD was 1.3%, a significant reduction from the 11.3% reported in the literature. Intraoperative prophylaxis could significantly reduce the incidence of RRD.

J Cataract Refract Surg 2009; 35:49-53

Cohen ¹⁰ (2006)
Merani ²⁹ (2007)
Ho ⁴⁸ (2007)
Current (2008)
Totals

CME = cystoid macular edema



Management of nucleus loss into the vitreous: long term follow up in 63 patients

Pedro Romero-Aroca, Juan Fernández-Ballart, Isabel Méndez-Marín, Merce Salvat-Serra, Marc Baget-Bernaldiz, and Jose A Buil-Calvo

Servicio de Oftalmología, Hospital Universitario Sant Joan de Reus, Barcelona, Spain; Departamento de Medicina y Cirugía, Universidad Rovira y Virgili, Tarragona, Spain

Statistical analysis of the final corrected visual acuity and cystoid macular edema in respect of the studied risk factors

	Final visual acuity				Cystoid macular edema			
	Univariate analysis		Logistic regression		Univariate analysis		Logistic regression	
	P value	IC interval 95%	P value	IC interval 95%	P value	IC interval 95%	P value	IC interval 95%
Gender	0.676	0.492–1.581	0.246	0.326–78.339	0.309	7.63 ± 0.92	0.483	0.240–20.463
High IOP	0.050	1.022–3.086	0.310	0.186–22.135	0.334	11/73	0.232	0.396–45.731
Surgery timing	0.002	1.318–5.120	0.628	0.023–9.646	<0.001	6/38	0.259	0.380–36.458
Corneal edema	0.005	1.256–4.183	0.088	0.002–1.535	0.005	11/87	0.034	2.80–15.66
Uveitis	0.587	0.603–2.395	0.204	0.331–79.254	0.001	13/78	0.011	2.073–36.828
Retinal detachment	<0.001	0.320–6.636	0.002	0.229–7.254	0.338	0.667–1.739	0.677	0.112–33.220
Postoperative CME	<0.001	1.888–26.893	0.003	0.000–10.072				
AC-IOL	0.671	0.492–1.577	0.104	0.623–66.834	0.093	0.667–1.739	0.719	0.203–10.092

Original Paper

Immediate Pars Plana Vitrectomy Improves Outcome in Retained Intravitreal Lens Fragments after Phacoemulsification

Ching-Long Chen, Teng-Yi Wang, Jen-Hao Cheng, Ming-Cheng Tai, Da-Wen Lu, Jiann-Tong Chen

Department of Ophthalmology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, ROC

[Address of Corresponding Author](#)

Ophthalmologica 2008;222:277-283 (DOI: 10.1159/000139953)

Purpose: To investigate the clinical features, visual acuity outcomes and the most appropriate intervention time in patients with retained lens fragments managed by pars plana vitrectomy. **Methods:** This was a retrospective review of the records of 78 patients who underwent pars plana vitrectomy for retained lens fragments at the Tri-Service General Hospital from January 1, 2000, to December 31, 2006. **Results:** The mean age of the patients was 70 years (range, 24-92 years). There were 40 men (51%) and 38 women (49%). The mean follow-up period after surgery was 13.8 months. Forty-five patients (58%) had vitrectomy within 1 day of phacoemulsification (group A), 22 (28%) within 1 week (group B) and 11 (14%) after more than 1 week (group C). No patients in group A developed complications, and 76% achieved a final visual acuity of 6/12 or better. In group B, all patients had elevated intraocular pressure, and 45% achieved a final visual acuity of 6/12 or better. In group C, all patients presented with corneal edema, moderate or severe uveitis, and elevated intraocular pressure. Of these patients, 27% had cystoid macular edema, 36% developed retinal detachment, and 27% had a final visual acuity of 6/12 or better. **Conclusion:** Pars plana vitrectomy performed immediately after cataract surgery for retained lens fragments is a viable option and may achieve a better visual outcome, with reduced risk of secondary glaucoma, retinal detachment or cystoid macular edema.

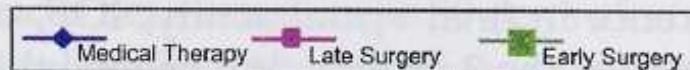
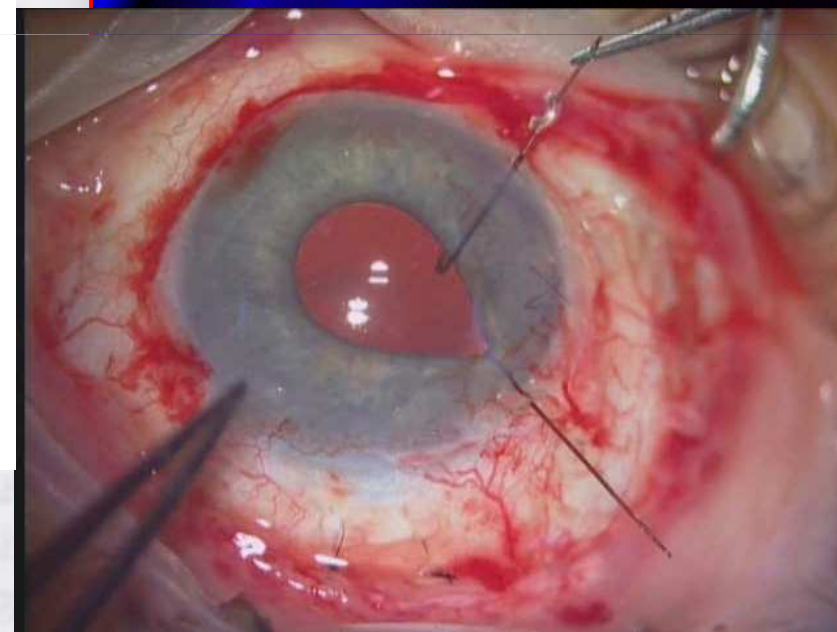
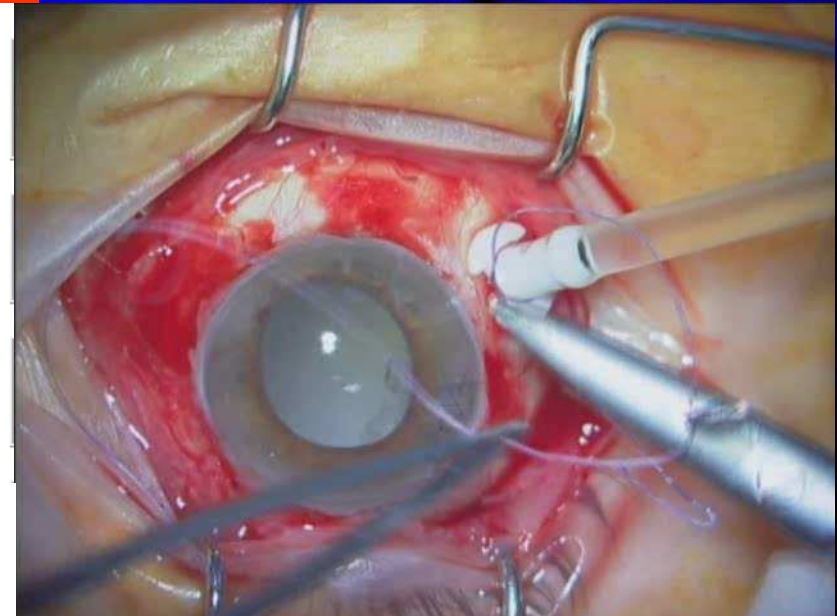
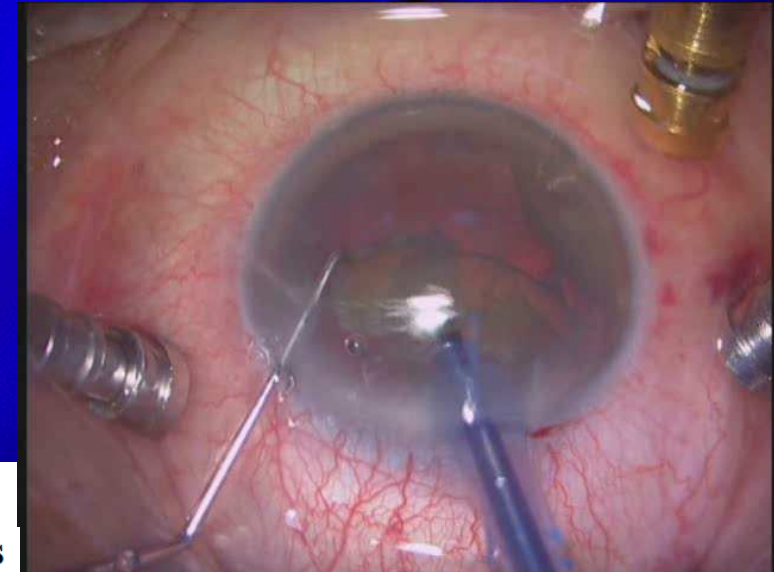
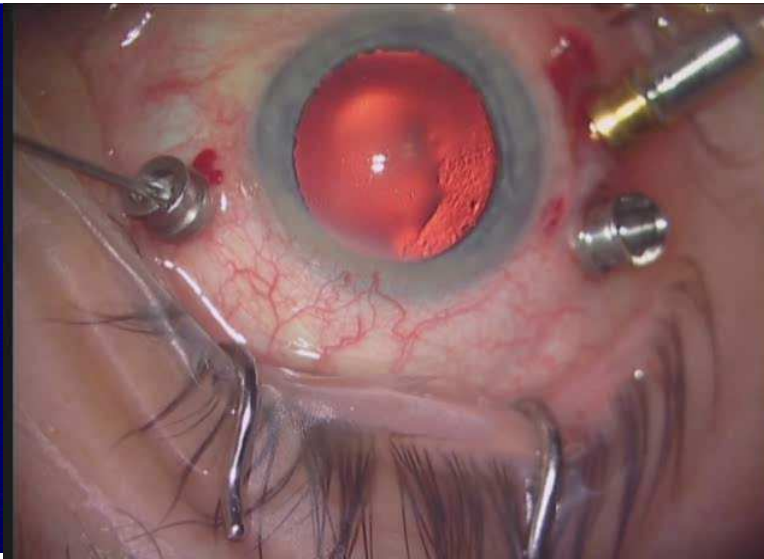


Figure 2. Intraocular pressure during the follow-up by group.





Outcomes of 77 Consecutive Cases of 25-Gauge Pars Plana Vitrectomy for Retained Lens Fragments

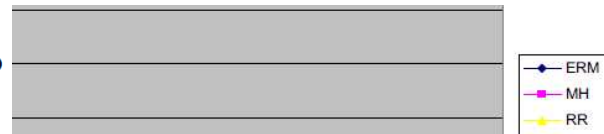
HO, LAWRENCE Y. MD; WALSH, MARK K. MD, PHD; HASSAN, TAREK S. MD

RETINA:

POST AUTHOR CORRECTIONS, 24 March 2010

doi: 10.1097/IAE.0b013e3181cd47d5

Original Study: PDF Only



Methods: This is a retrospective consecutive case series of 17 patients who presented with retained lens fragments, ranging from mostly cortex to the entire lens, which were managed using only 25-gauge instrumentation.

Conclusion: A 25-gauge vitrectomy technique, without the use of a phacofragmatome, may be a suitable alternative to 20-gauge vitreous surgery using a phacofragmatome in the management of retained lens fragments after complicated cataract surgery. Clinical outcomes and complication rates are comparable to those found in the literature for 20-gauge surgery.

Pre-operative

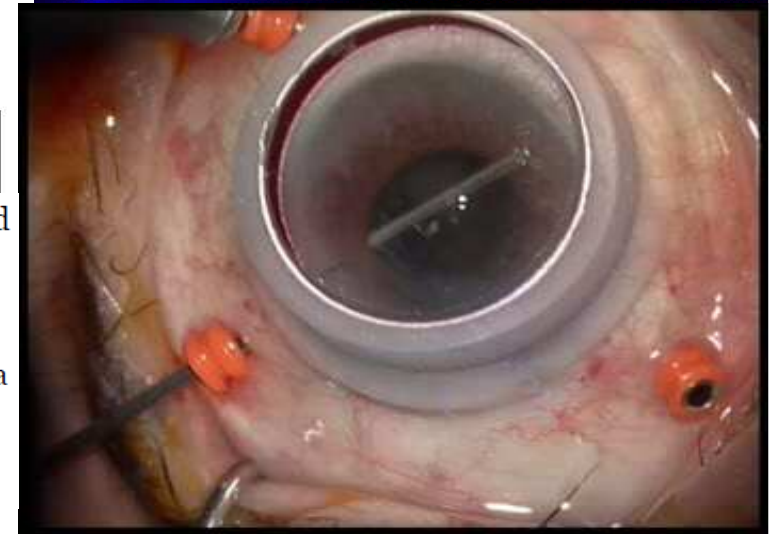
POM1

POM3

Post-operative final

75 seconds (17–470), and net operating time of 24.1 minutes (7.1–74.6).

Conclusions: Twenty-three-gauge instrumentation is effective for a variety of vitreoretinal surgical indications. The safety profile compared favorably with published rates for 25-gauge systems. *Ophthalmology* 2007;

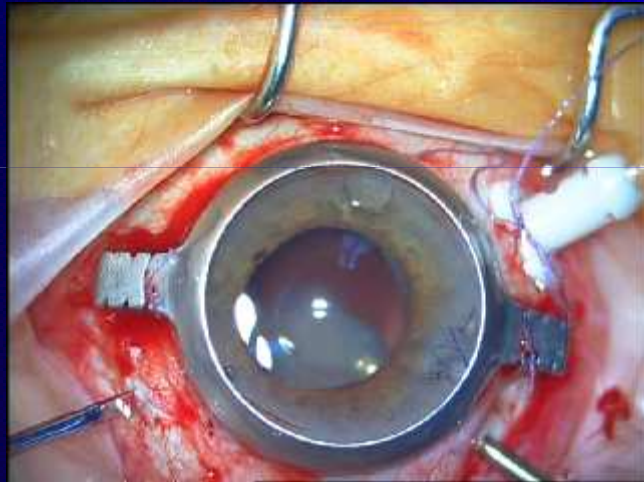


Mininvasiva per materiale lenticolare in CV

- Meno traumatica (< rotture iatrogene)
- Post-operatorio più tranquillo
- Minore percezione di “gravità”
- Adeguata per “outpatient”
- Risparmio congiuntivale
- Minore durata?
- Minore incidenza di DR, EMC?
- Range di applicazioni più ristretto?

Mininvasiva per materiale lenticolare in CV

In attesa di studi.... (retrospettivi)



The end