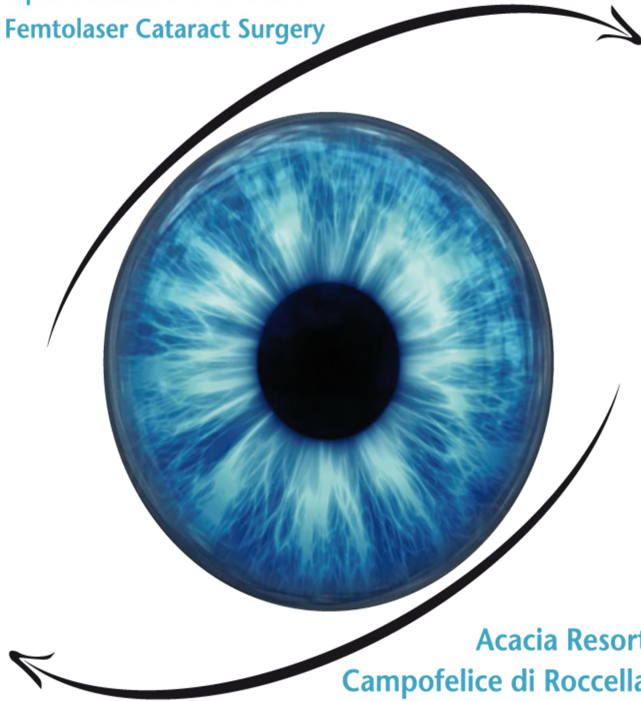


Distacco acuto sieroso ed Edema maculare dopo Facoemulsificazione non complicata

Michele Bellino
S.Gulisano,F.Occhipinti,M.G.Afflitto,R.Panebianco,G.Faro
A.Longo,M.G.Uva

Clinica Oculistica
Università degli Studi di Catania
Direttore: Prof. T. Avitabile

→ *Edema Maculare Pseudofachico:*

- 0,2-2 %
- 4-6 weeks after weeks, lasts several months
- Cystic spaces in the outer plexiform layer

- **Fattori di rischio:**
- ✓ Iris Trauma
- ✓ Rupture of PC
- ✓ Vitreous loss or incarceration
- ✓ Dislocated IOL
- ✓ Active Uveitis
- ✓ Diabetes

-> *Distacco sieroso acuto Maculare con Edema*

- **1° day with recovery in few days**
- **large serous macular detachment with fluid in the outer retinal layers**

Related to high-concentration intracameral cefuroxime ??

CASE REPORT

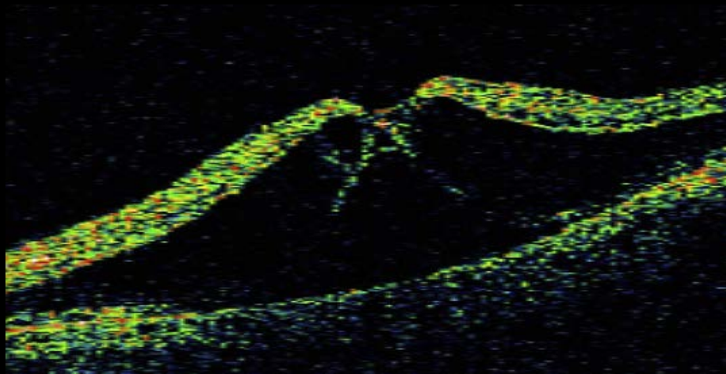
Early serous macular detachment after phacoemulsification surgery

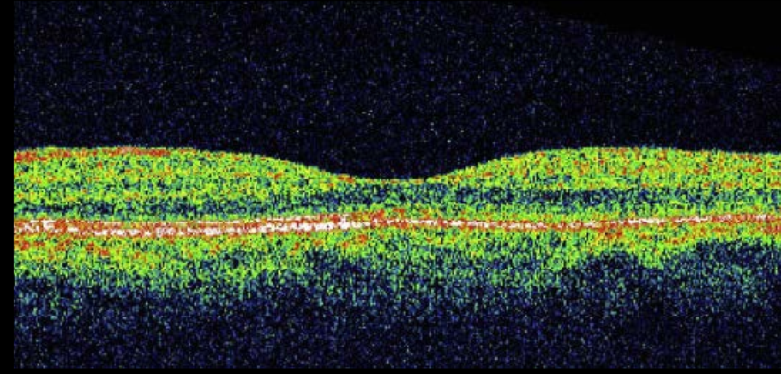
Hakki Zeki Buyukyildiz, MD, PhD, Gokhan Gulkilik, MD, Yusuf Ziya Kumcuoglu, MD

We report 2 cases of serous macular detachment with intraretinal fluid accumulation that developed 1 day after uneventful phacoemulsification surgery. Because of a dilution error, both eyes received 2 mg/0.1 mL of intracameral cefuroxime at the end of surgery. On postoperative day 1, the corrected distance visual acuity (CDVA) was 20/400 in both eyes. Optical coherence tomography revealed intraretinal fluid accumulation with serous macular detachment, and central foveal thickness measurements were 909 μm and 559 μm in Case 1 and Case 2, respectively. Case 1 responded to systemic acetazolamide, but the condition recurred after cessation of therapy; it then responded to systemic steroid treatment. Case 2 responded to an intravitreal injection of 4 mg of triamcinolone and remained stable throughout the follow-up. The final CDVA was 20/20 in Case 1 and 20/25 in Case 2, and central foveal thickness measurements were 205 μm and 208 μm, respectively.

Financial Disclosure: No author has a financial or proprietary interest in any material or method mentioned.

J Cataract Refract Surg 2010; 36:1999–2002 © 2010 ASCRS and ESCRS





2 CASI: STEROIDI SISTEMICI O INTRAVITREALI

ARTICLE

Ocular toxicity after intracameral injection of very high doses of cefuroxime during cataract surgery

Marie-Noëlle Delyfer, MD, PhD, Marie-Bénédicte Rougier, MD, PhD, Sandy Leoni, MD, Qiuhua Zhang, MD, Francis Dalbon, MD, Joseph Colin, MD, Jean-François Korobelnik, MD

PURPOSE: To report cases of intraocular inflammation after intracameral injection of a very high dose of cefuroxime at the end of uneventful cataract surgery.

SETTING: Department of Ophthalmology, Bordeaux University Hospital, Bordeaux, France.

DESIGN: Case series.

METHODS: Patients were followed on an outpatient basis and were examined postoperatively at 1 and 5 days and 6 weeks. Central macular thickness, angiography, central corneal thickness (CCT), endothelial cell density (ECD), and electroretinography (ERG) were analyzed to evaluate ocular toxicity.

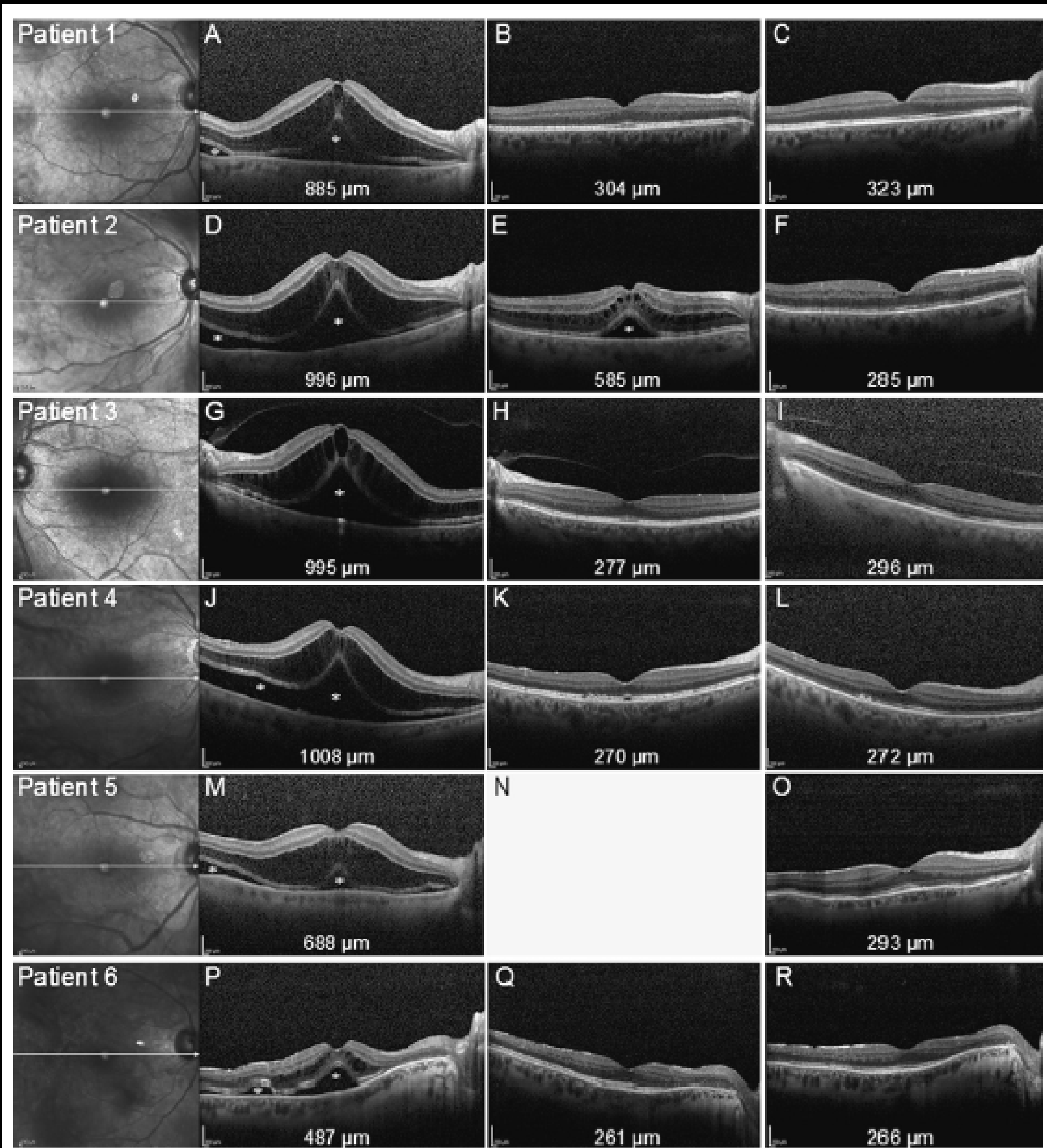
RESULTS: One day postoperatively, the mean corrected distance visual acuity (CDVA) was 0.95 logMAR $\pm$ 0.40 (SD). All the cases had moderate anterior inflammation. Retinal optical coherence tomography scans systematically showed extensive macular edema (mean 843.2 $\pm$ 212.7 μm) associated with a large serous retinal detachment. Fluorescein angiograms showed diffuse leakage without abnormal retinal perfusion. At 5 days, the mean CDVA improved significantly to 0.52 $\pm$ 0.29 logMAR (P<.005), as did the macular edema and serous retinal detachment (mean 339.4 $\pm$ 138.3 μm) (P=.005). At 6 weeks, the mean CDVA reached 0.09 $\pm$ 0.06 logMAR. Modifications in CCT and ECD were similar to those observed after uneventful phacoemulsification. The macular thickness (mean 288.4 $\pm$ 22.6 μm) and profile returned to normal in all patients, although ERG recordings showed reduced rod photoreceptor cell function (P<.05).

CONCLUSIONS: Intracameral injection of high doses of cefuroxime induced anterior and posterior inflammation. Without surgical intervention, the final visual outcome was satisfactory in all cases. Long-term retinal function, however, must be assessed through repeated ERG recordings.

Financial Disclosure: No author has a financial or proprietary interest in any material or method mentioned.

J Cataract Refract Surg 2011; 37:271–278 © 2011 ASCRS and ESCRS

6 CASI: UNICA SEDUTA OPERATORIA: ERRORE DILUIZIONE


Patient 1
A
B
C
885 µm
304 µm
323 µm
Patient 2
D
E
F
996 µm
585 µm
285 µm
Patient 3
G
H
I
995 µm
277 µm
296 µm
Patient 4
J
K
L
1008 µm
270 µm
272 µm
Patient 5
M
N
O
688 µm
293 µm
Patient 6
P
Q
R
487 µm
261 µm
266 µm

CASE SERIES

Acute serous macular detachment and edema after uncomplicated phacoemulsification: A case series

Antonio Longo, MD, PhD, Michele Reibaldi, MD, PhD, Maurizio G. Uva, MD, Vincenza Bonfiglio, MD, PhD, Maria Cordelia Strano, M. Ortho, Andrea Russo, MD, PhD, Mario Damiano Toro, MD, Michele Bellino, MD, Teresio Avitabile, MD

ABSTRACT • RÉSUMÉ

Objective: To report cases of acute serous macular detachment and edema after uncomplicated phacoemulsification.
Design: Retrospective case series.
Participants: We reviewed the clinical data of 5 patients who developed an acute serous macular detachment and edema after uncomplicated phacoemulsification with intraocular lens implantation by the same expert surgeon and without any complication during surgery.
Methods: Best corrected visual acuity (BCVA), biomicroscopy, fundus examination, and optical coherence tomography were performed at 1, 3, 7, and 30 postoperative days.
Results: On the first postoperative day, all eyes had low visual acuity (median 1.0 logMAR) despite normal postoperative appearance of the anterior segment. Optical coherence tomography showed serous macular detachment with intraretinal fluid accumulation. After treatment with oral indomethacin and acetazolamide, at 7 days, intraretinal and subretinal fluid were fully reabsorbed and BCVA improved (at least 0.1 logMAR). In the following 6 months, no eye had recurrence of macular edema.
Conclusions: Acute serous macular detachment and edema can occur after uncomplicated phacoemulsification. It should be considered in cases of low visual acuity during the early postoperative period.

Objet : Signaler des cas de décollement maculaire grave et d'œdème après une phacoémulsification sans complications.
Nature : Étude de cas rétrospective.
Participants : Nous avons passé en revue les données cliniques relatives à 5 patients chez qui s'est développé un décollement maculaire grave et un œdème après une phacoémulsification sans complications avec implantation de lentilles intraoculaires par le même chirurgien spécialiste et sans complication opératoire.
Méthodes : Les examens suivants ont été réalisés 1, 3, 7 et 30 jours après l'opération : meilleure acuité visuelle corrigée (MAVC), biomicroscopie, examen du fonds de l'œil et tomographie de cohérence optique.
Résultats : Le premier jour après l'opération, tous les yeux affichaient une faible acuité visuelle (médiane 1.0 logMar) malgré une apparence postopératoire normale du segment antérieur. La tomographie de cohérence optique a révélé un décollement maculaire grave avec accumulation de fluide intrarétinien. Après 7 jours de traitement à l'indométacine et à l'acétazolamide par voie orale, l'entière résolution du fluide intra et sous-rétinien a été observée, et la MAVC s'était améliorée (d'au moins 0,1 logMAR). Dans les 6 mois qui ont suivi, aucune récurrence d'œdème maculaire n'a été constatée.
Conclusions : Un décollement maculaire grave et l'œdème sont possibles même après une phacoémulsification sans complications. Une attention particulière devrait être apportée aux cas de faible acuité visuelle dans les premiers jours suivant l'opération.

STUDIO RETROSPETTIVO

PAZIENTI OPERATI TRA 2009 E IL 2013

DIAGNOSI CATARATTA

INTERVENTO NON COMPLICATO FACO+IOL

STOP & CHOP
IOL PIEGHEVOLE

Stesso operatore, stesso facoemulsificatore, stessi settaggi macchina

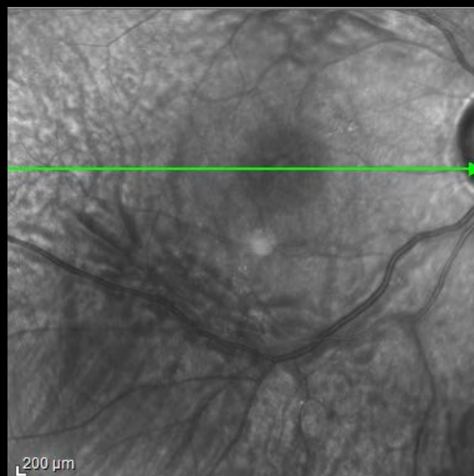
1mg cefuruxime in 0.1 mL (provided daily by the hospital farmacy)
No diabete, uveite, glaucoma, trauma, membrana epiret, preced chirurgia

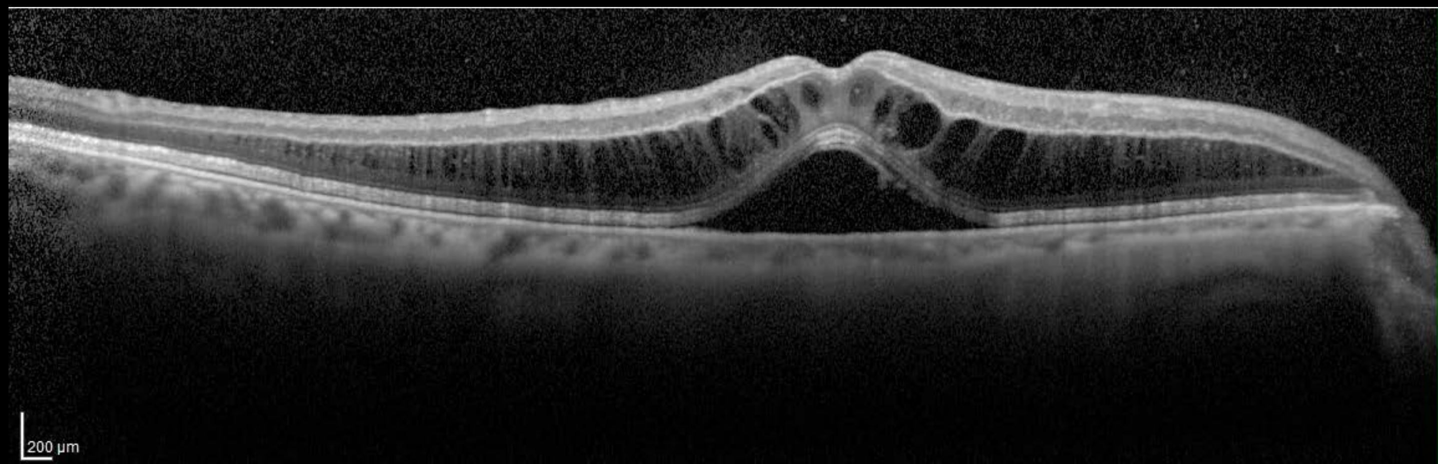
PRIMO GIORNO POST-OPERATORIO

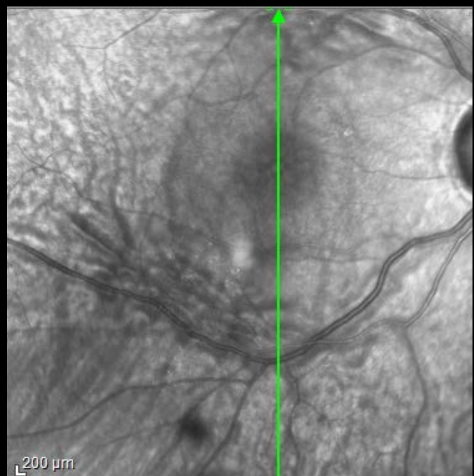
(FACO+IOL NON COMPLICATA)

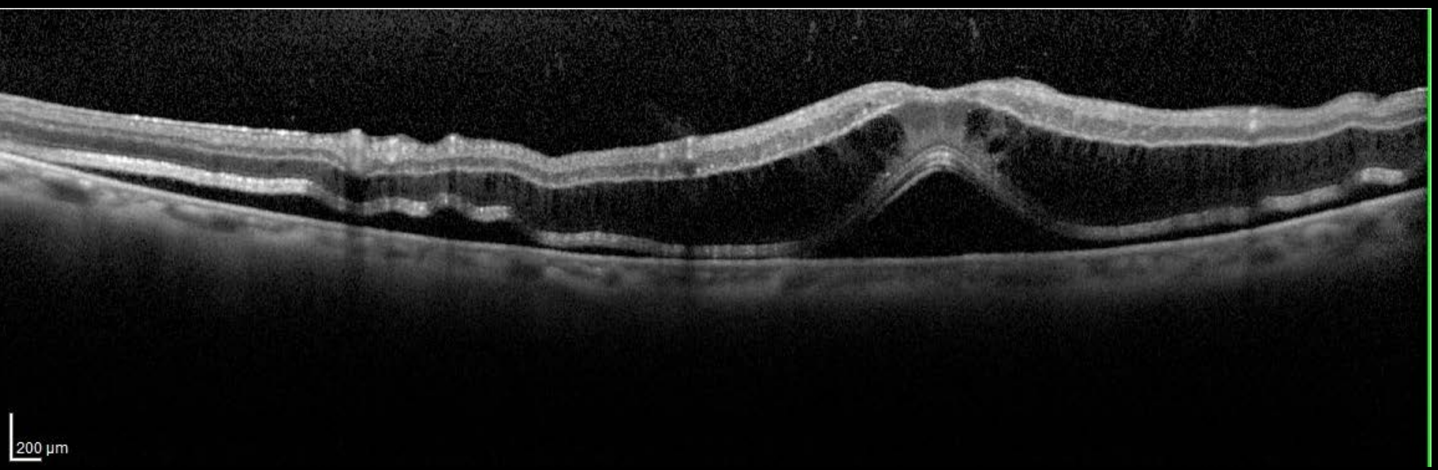
VUSUS BASSO (<1/10)

NONOSTANTE OTTIMO ASPETTO SEGM. ANTERIORE









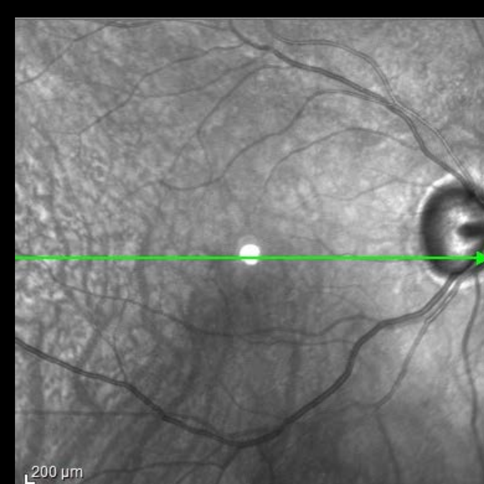
TERAPIA

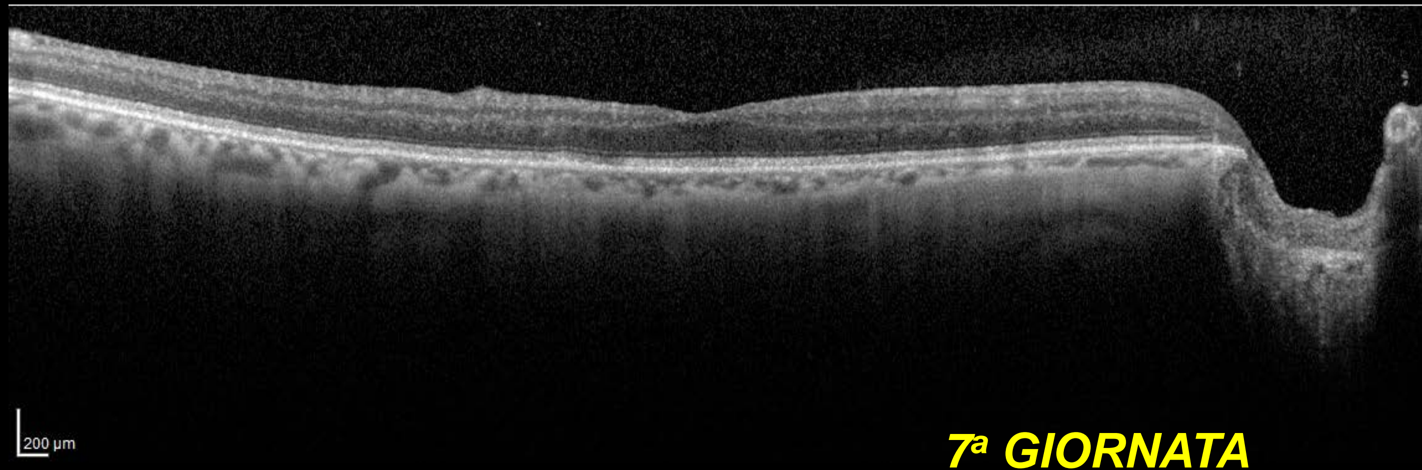
INDOMETACINA PER OS (25 mg/die x 5gg)

ACETAZOLAMIDE PER OS (125mg Tid x 5gg)

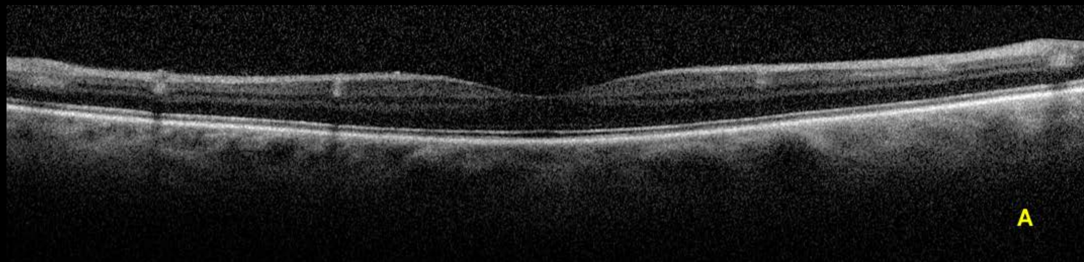
INDOMETACINA TOPICA (0.1% tid x 30gg)

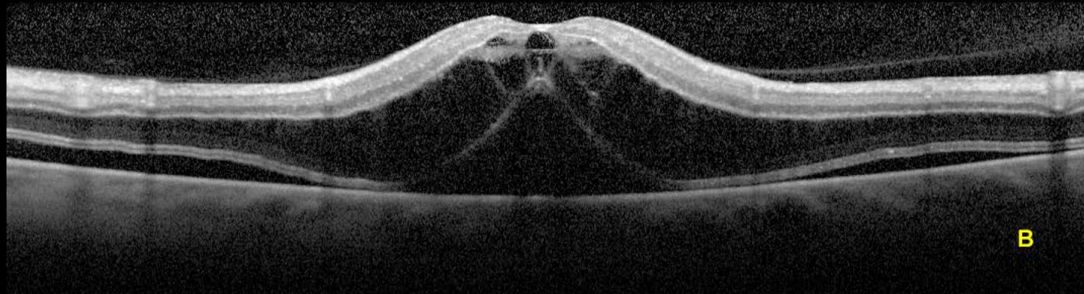
REGRESSIONE IN POCHI GIORNI
VISUS OTTIMALE, NO RECIDIVE





7ª GIORNATA


A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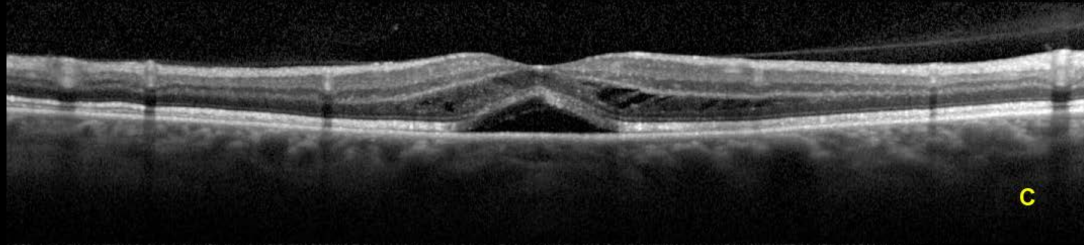
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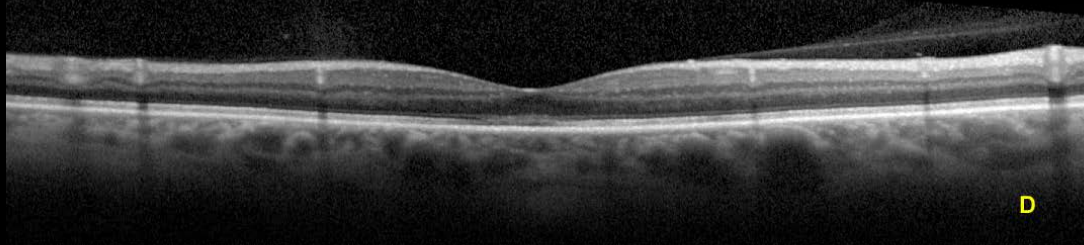
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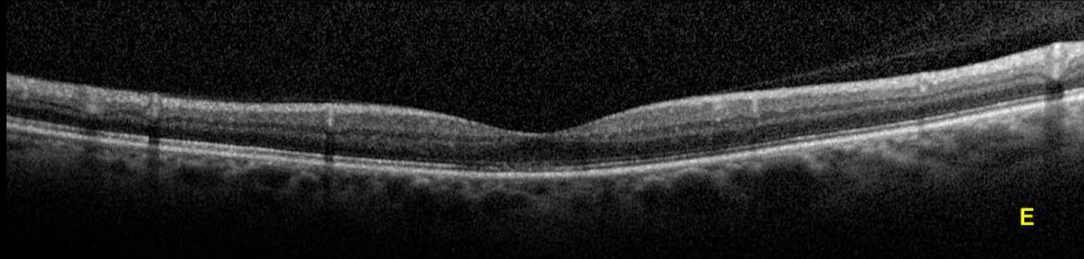
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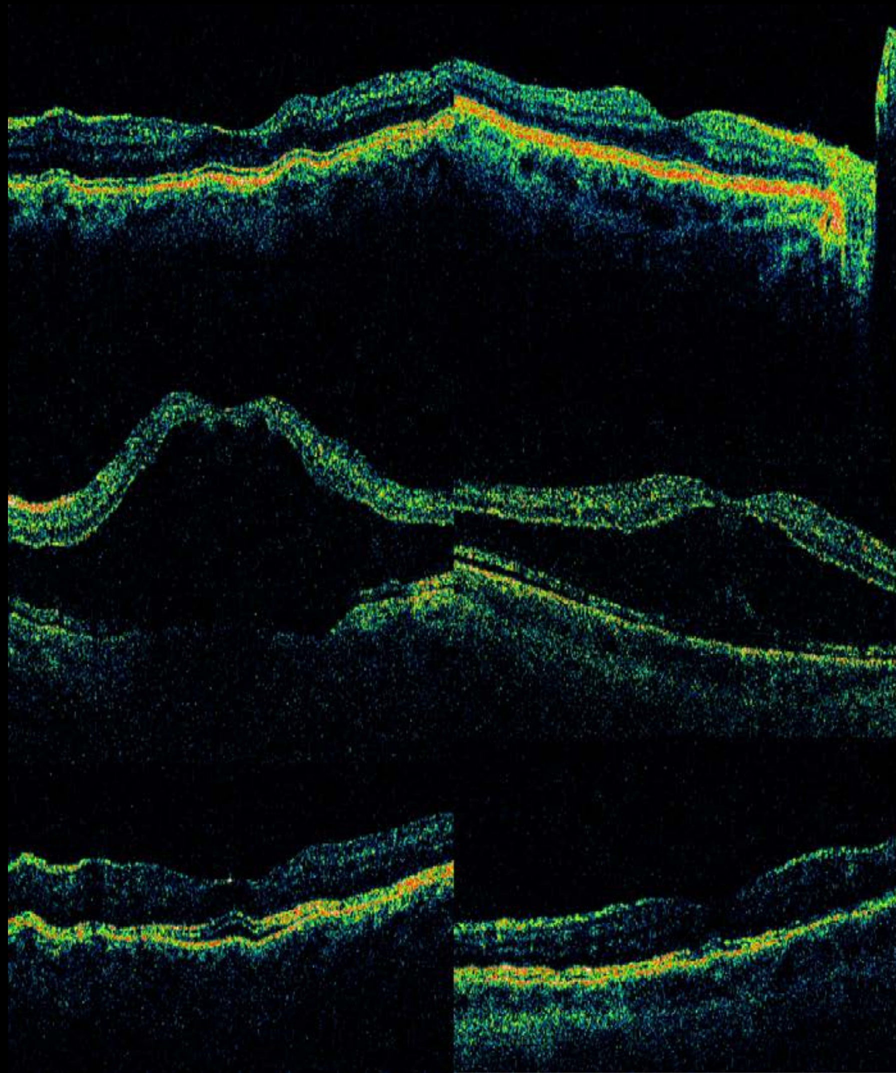
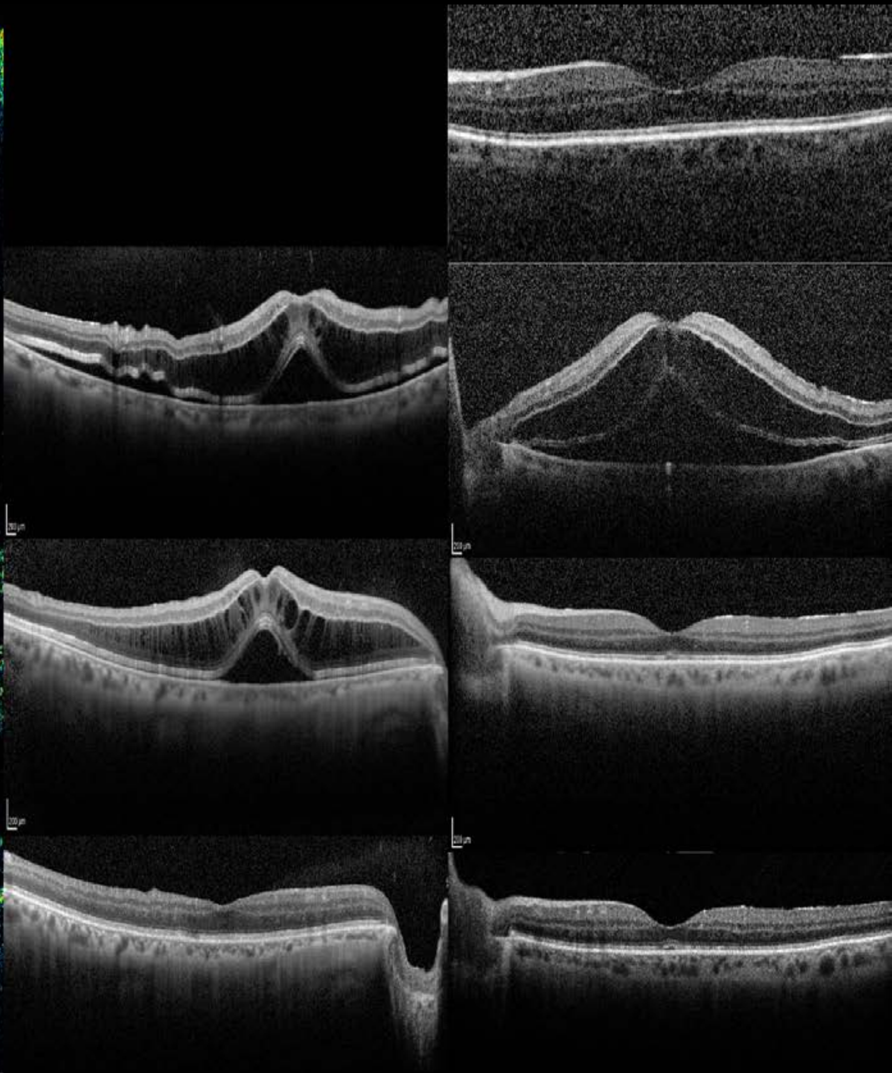




SETTAGGI facoemulsificatore:

1° fase (central sculpting): altezza bottiglia 100 cm, US 50%, aspirazione 40 mL per minuto, vacuum 40 mmHg.

2° fase (fragment emulsification): altezza bottiglia 110 cm, US 28%, aspirazione 40 mL per minuto, vacuum 400 mmHg.

3° fase (irrigation/aspiration): altezza bottiglia 110 cm, flow 40 mL per minuto, vacuum 450 mmHg.

Alla fine dell' intervento iniezione in camera anteriore di 1 mg/0.1 mL di cefuroxime in BSS.

METODI

Acuità visiva
Biomicroscopia segmento anteriore
IOP (Applanatio Goldmann)
Esame fundus
OCT in midriasi

TERAPIA

indometacina per os (25 mg/die per 5 giorni)
acetazolamide per os (125 mg tre volte al dì per 5 giorni)
indometacina 0,1% collirio (1 gtt x 3 per 1 mese)

Sono stati aggiunti alla terapia standard:

cefixime 400 mg/die per os per 5 giorni;
associazione steroide+antibiotico (1gtt x4 per 1 mese)
tropicamide 1% (1 gtt x2 per 30 giorni)

RISULTATI

5 occhi di 5 pazienti (3m-2f), età media 59 ±8 anni
Prima giornata post-operatoria:
cornea trasparente, no cheratop. striata, lieve cellularità in CA
Cefuroxime 1 mg in 0.1 mL (safe dose)

Lunghezza assiale 25.7 ±1.1

Nessun paziente pregresse uveiti o infiammazioni oculari, traumi o interventi oculari, glaucoma, diabetico

			Preoperative			IOL	
Pt	**Age**	**Sex**	**Refraction**	**Ax.lenght**	**PVD**	**Model**	**Power**
1	63	m	-7	26.2	no	AR40e	16
2	50	m	-2	25.12	no	AR40e	10
3	70	m	-9	24.99	no	Hoya251	18
4	54	f	-13	27.4	no	AR40e	9
5	60	f	-5.5	24.76	no	BLMI60	18.5
mean	**59**		**-7.3**	**25.7**			**16.3**
sd	**8**		**4.1**	**1.1**			**4.3**

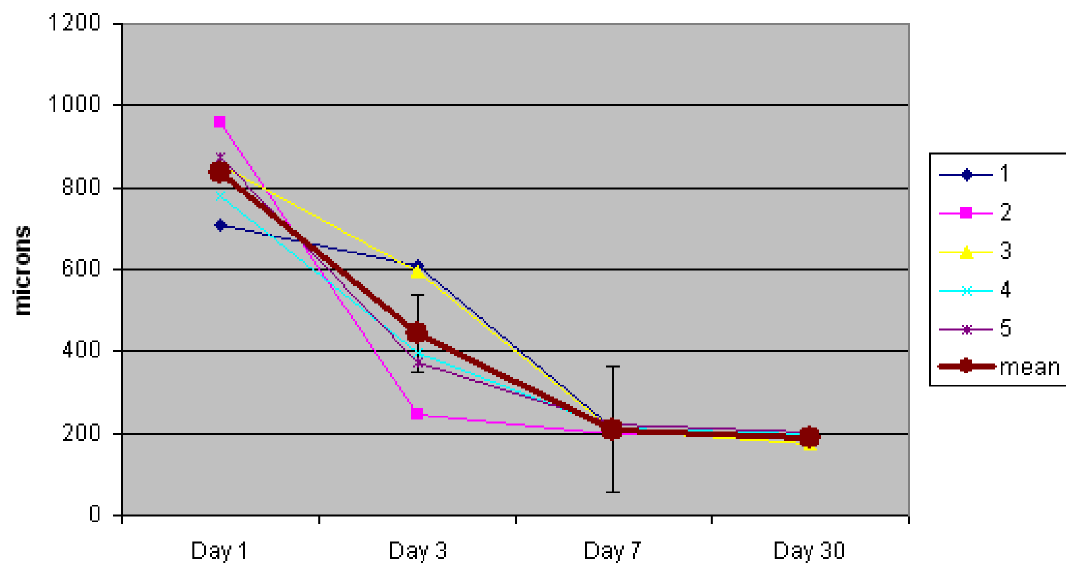
CENTRAL FOVEAL THICKNESS (microns)				
Pt	Day 1	Day 3	Day 7	Day 30
1	710	611	214	188
2	960	246	200	192
3	857	593	207	174
4	778	398	211	199
5	874	374	220	204
mean	**836**	**444**	**210**	**191**
sd	**96**	**155**	**8**	**12**

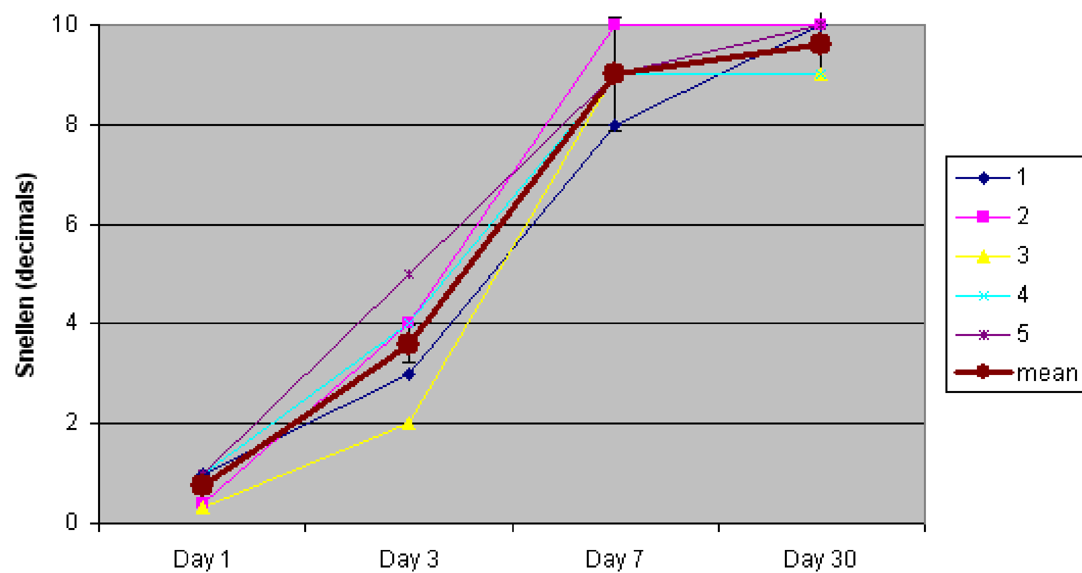
BEST CORRECTED VISUAL ACUITY				
Pt	Day 1	Day 3	Day 7	Day 30
1	0.1	0.3	0.8	1.0
2	0.04	0.4	1.0	1.0
3	0.06	0.2	0.9	0.9
4	0.1	0.4	0.9	0.9
5	0.1	0.5	0.9	1.0
mean	**0.08**	**0.36**	**0.90**	**0.96**
sd	**0.03**	**0.11**	**0.07**	**0.05**

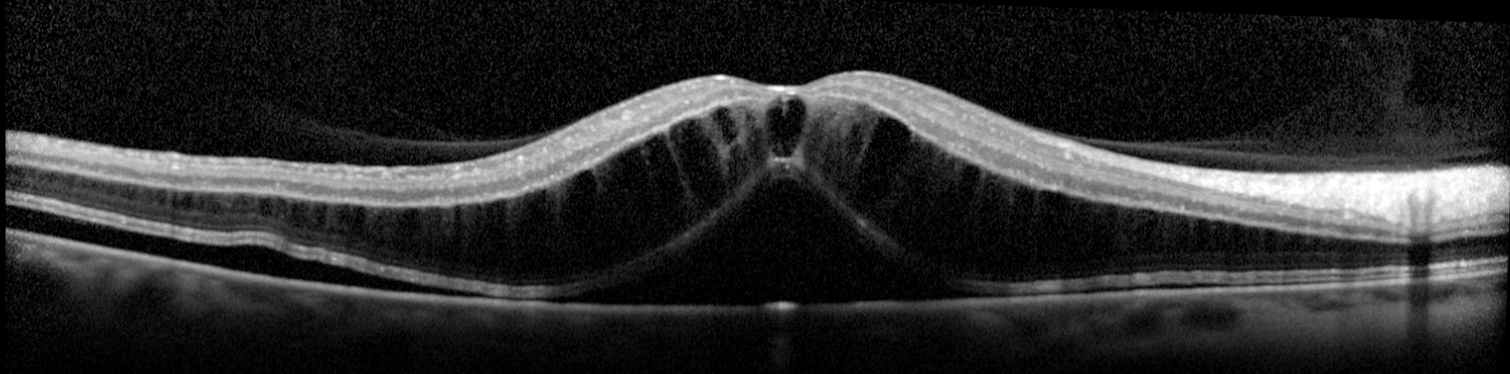
In una settimana:

Scomparsa liquido sottoretinico
Normalizzazione acuità visiva

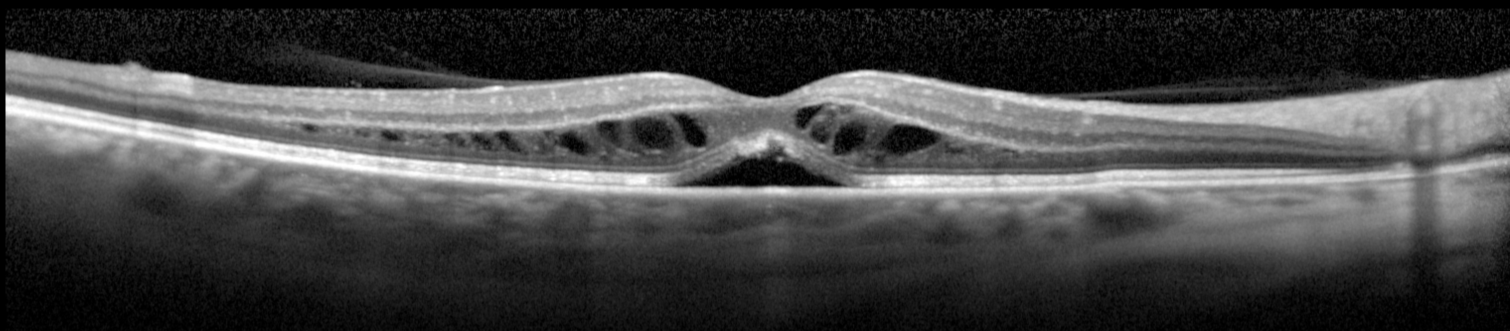
No recidive


CENTRAL FOVEAL THICKNESS
microns
1200
1000
800
600
400
200
0
Day 1
Day 3
Day 7
Day 30
1
2
3
4
5
mean


BEST CORRECTED VISUAL ACUITY
Snellen (decimals)
10
8
6
4
2
0
Day 1
Day 3
Day 7
Day 30
1
2
3
4
5
mean



1ª GIORNATA



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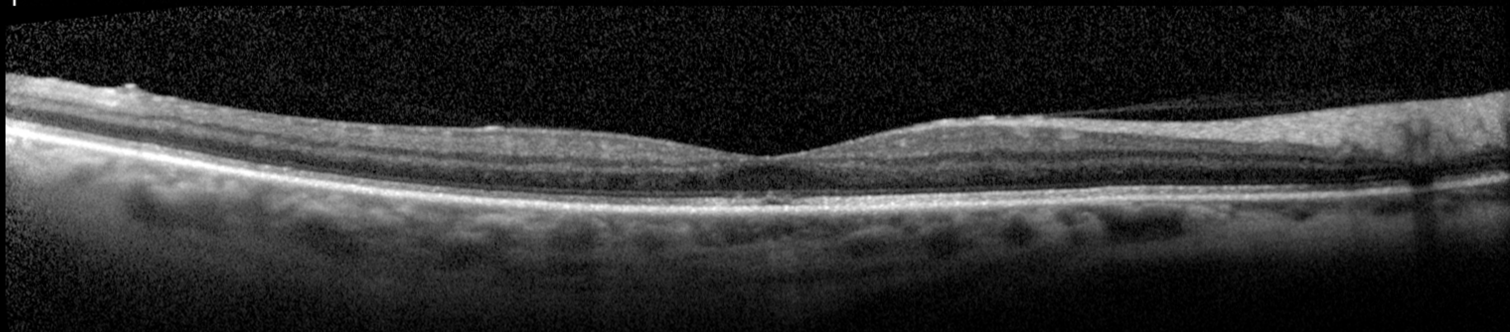


7ª GIORNATA

CONCLUSIONI

EVENTO RARO (NON RILEVATO?)

TRANSITORIO, RISOLVIBILE CON TERAPIA MEDICA, NON RECIDIVANTE

PATOGENESI: NON DEFINITA

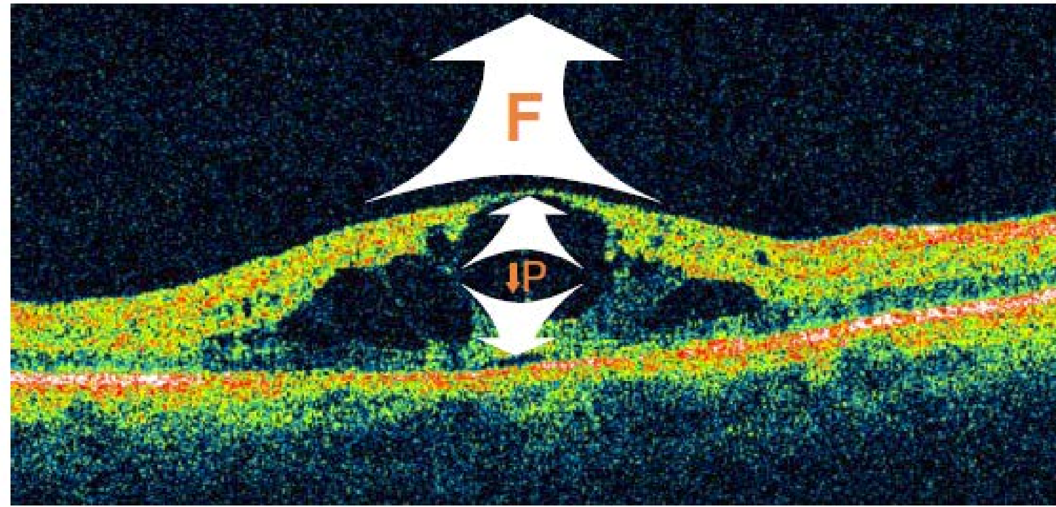
RIPORTATI ALCUNI CASI, ATTRIBUITI AD ECCESSO DI CEFUROXIME (SINDROME TOSSICA DEL SEGMENTO ANTERIORE) CON FIBRINA, MARCATA REAZIONE

Graefes Arch Clin Exp Ophthalmol (2009) 247:147–163
DOI 10.1007/s00417-008-0980-7

REVIEW ARTICLE

Physiology of vitreous surgery

Einar Stefánsson



PAZIENTI MIOPI, RELATIVAMENTE GIOVANI,
SENZA DISTACCO POSTERIORE DI VITREO

IPOTESI:
TRAZIONE VITREALE EX VACUO IN PAZIENTI SENZA DISTACCO DI VITREO PROVOCA RIDUZIONE PRESSIONE INTRATISSUTALE, CON FUORIUSCITA DI LIQUIDI?