Posterior Idiopathic Conditions

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MERSI

2026 Fellow Lecture

MERSI

Massachusetts Eye Research and Surgery Institution

Est. 2005

OIUF

THE OCULAR IMMUNOLOGY AND UVEITIS FOUNDATION

Dedicated to Eye Disease Cure and Education

Chief complaint

- 36-year-old female referred by local optometrist due to incidental retinal findings OD on routine exam
- Previously seen there for giant papillary conjunctivitis OU that had resolved with contact lens holiday
- Recently had worsened ocular surface symptoms so she followed up with optometrist

HPI

Endorses:

Foreign body sensation OD>OS with associated redness

Tiny intermittent blurry spot OD that resolves with blinking and eye movement

Denies:

Pain, changes in visual acuity, persistent blind spots, photopsias, recent illness

Ocular and past medical history

- GPC previously resolved after 6-month CL holiday and switch to daily CLs
- Refractive error, myopia

- Denies any trauma/surgery and autoimmune disease history
- ROS largely unremarkable

Social and family history

- Grew up in northeastern USA, has visited farms but denies visiting Ohio and Mississippi River Valleys
- History of gout and melanoma in father, psoriasis and colon cancer in mother

Exam

Visual acuity (distance)
- cc 20/30, 20/25
- ph 20/25 +2, 20/20

IOP (mmHg)
- 17, 18

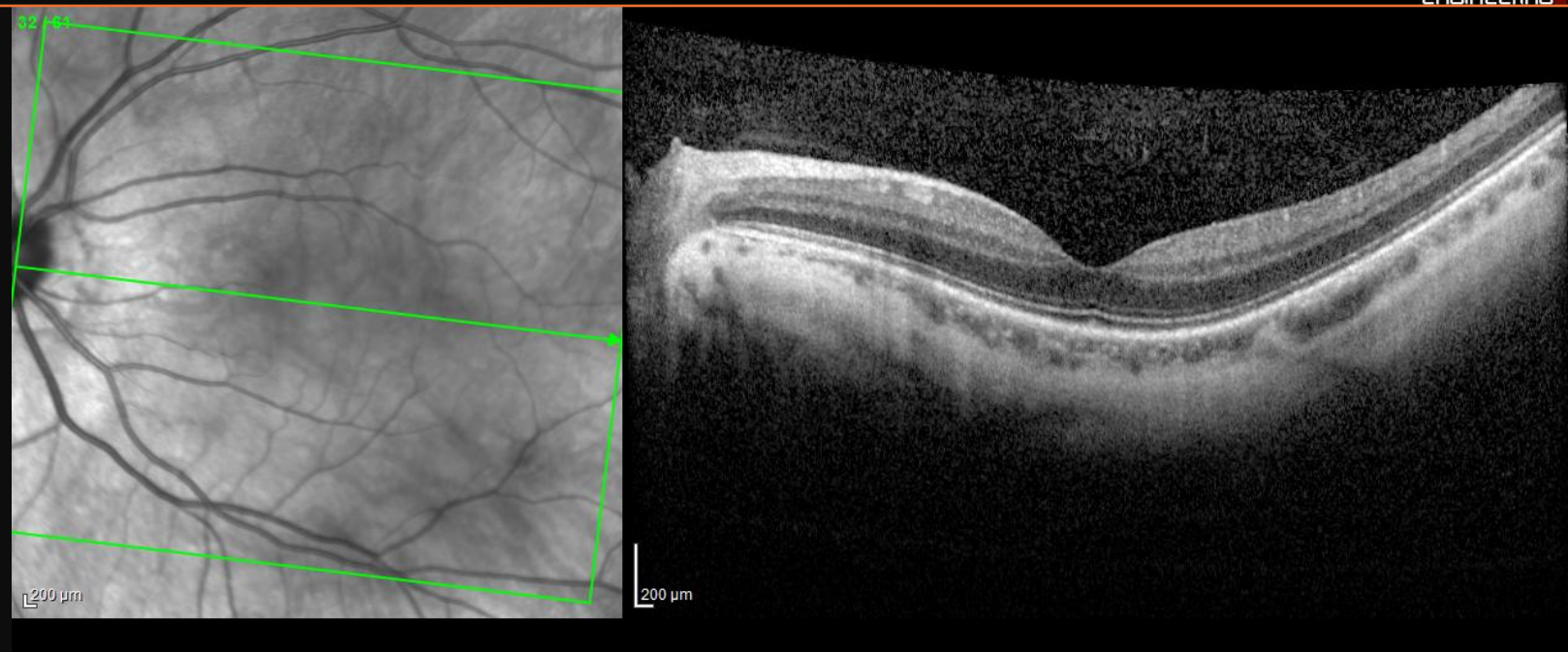
Pupils
- RRTL OU, - APD

Lens Rx
-3.50, -0.75, 83
-6.25, -0.50, 105

	OD	OS
L/L	2+ GPC, UL	2+ GPC, UL
C/S	Trace bulbar injection	Trace bulbar injection
Cornea	Clear and compact	Clear and compact
AC	Deep and quiet	Deep and quiet
Iris	Normal	Normal
Lens	Phakic, clear	Phakic, clear
Vitreous	Clear, no cell	Clear, no cell

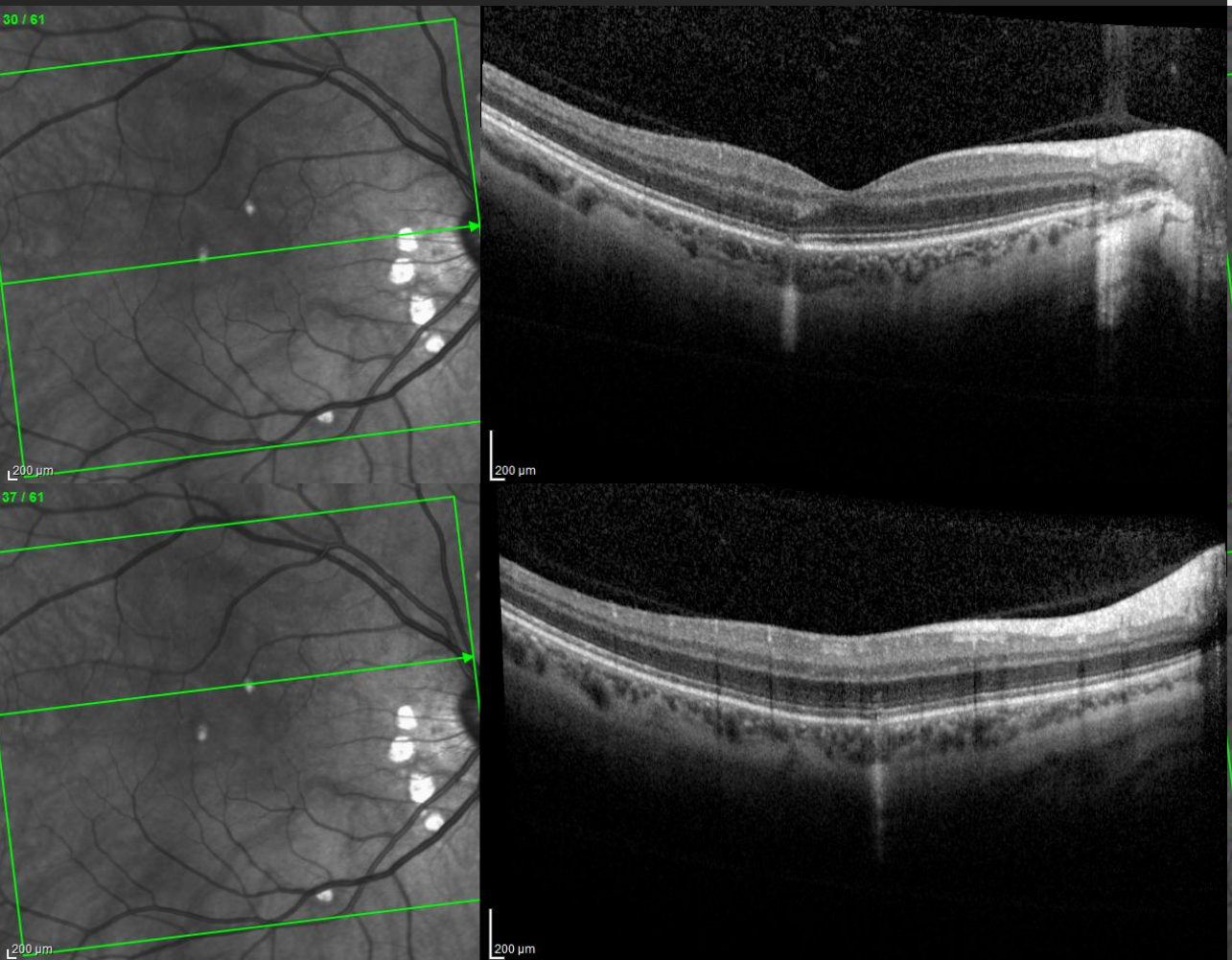
Imaging

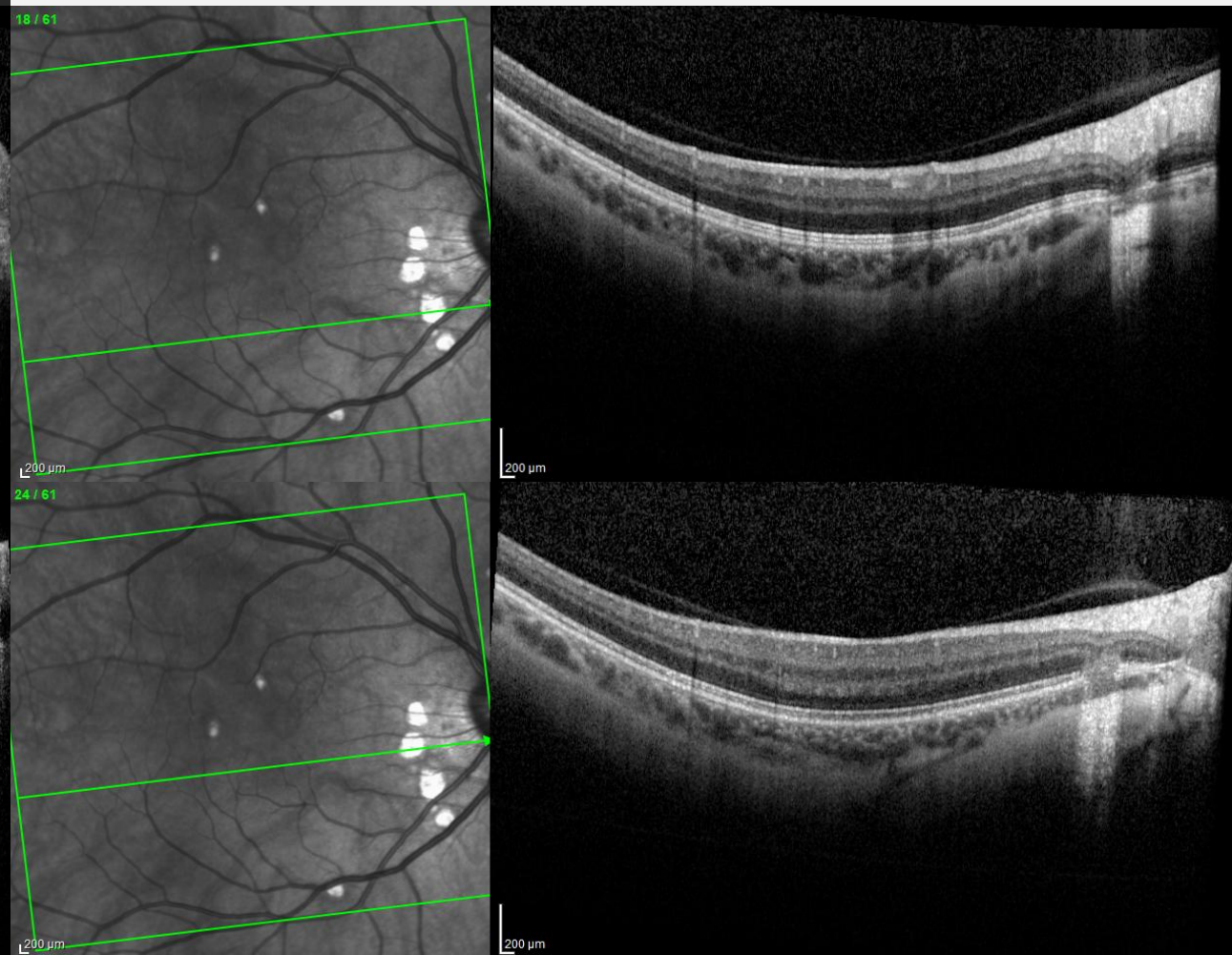

200 µm
/2017, OD
OCT 30° [HS] ART(9) Q: 28
HEIDELBERG ENGINEERING


32 / 64
200 µm
200 µm

Macular lesions

Peripapillary lesions

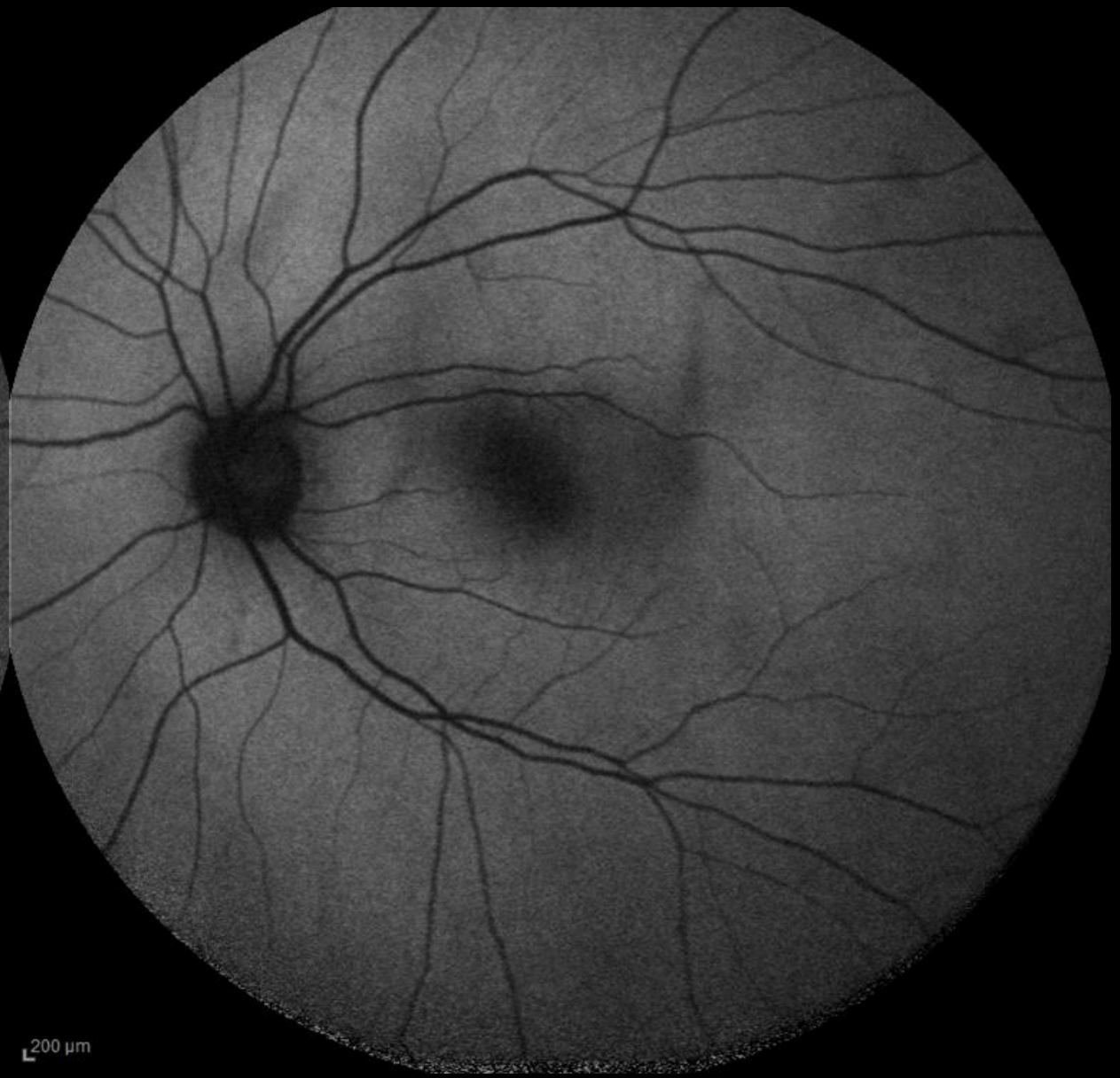





MultiColor
200 µm


MultiColor
200 µm


200 µm


200 µm

FA 1:45.57 55° ART(10)

FA 2:59.49 55° ART(11)


200 µm
7/11/2016, OD
FA 0:33.48 55° ART(8)
200 µm
7/11/2016, OD
FA 0:51.82 55° ART(7)
200 µm
7/11/2016, OD
FA 1:45.57 55° ART(10)
/2016, OD
4:30.93 102° ART(12)
HEIDELBERG ENGINEERING


200 µm
7/11/2016, OD
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/2016, OD
4:30.93 102° ART(12)
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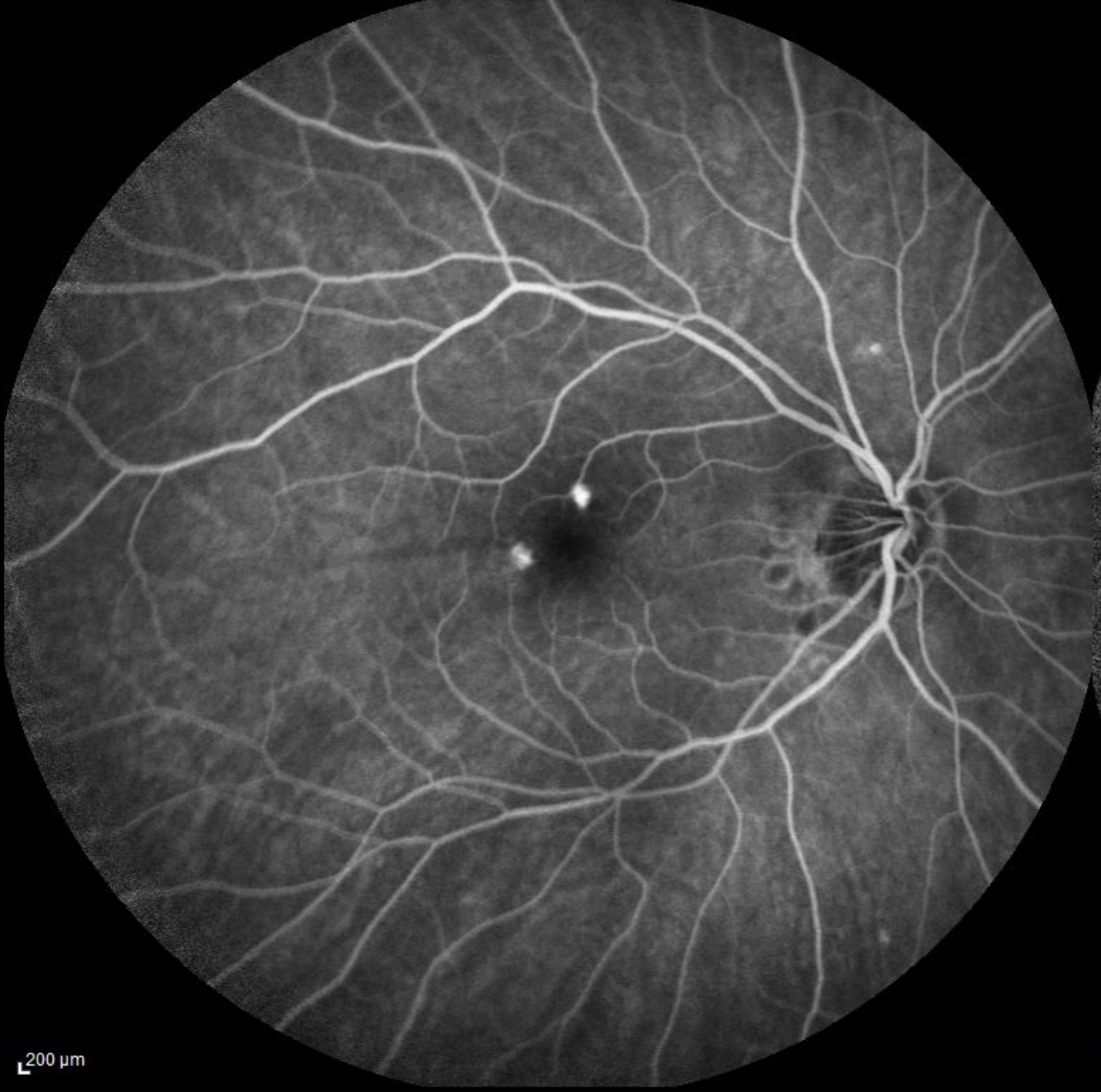
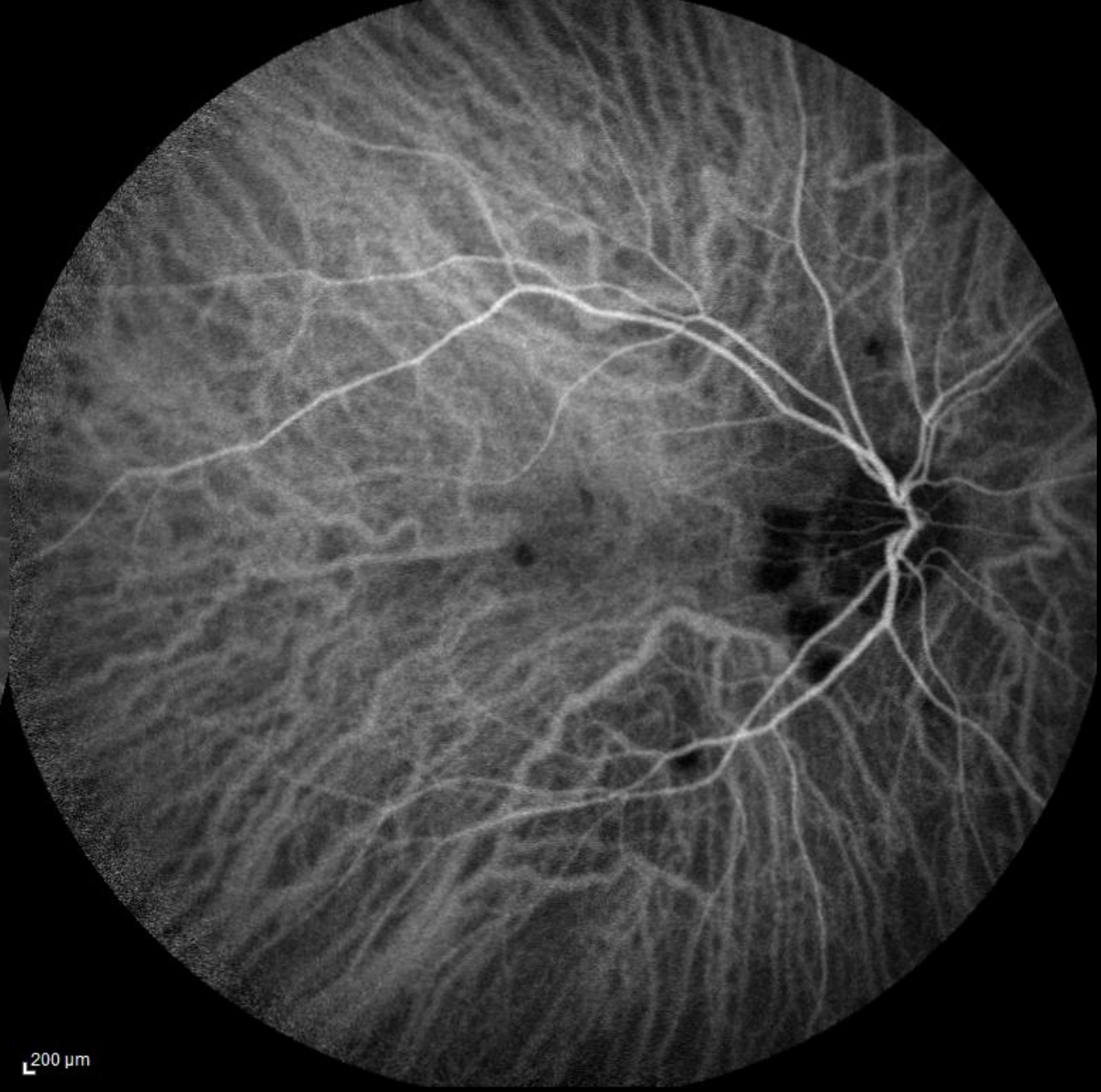




FA&&ICGA 4:35.80 55° ART(9) 4:35.78 55° ART(9)

DDx?

- PIC
- POHS
- MFC (multifocal choroiditis)
- Serpiginous choroiditis
- Ampiginous choroiditis
- sarcoidosis

- Myopic degeneration
- Acute macular neuroretinopathy
- Central serous retinopathy
- Macular telangectasia

- Toxoplasmosis (PORT)
- Syphilis
- Tuberculosis
- Lyme disease

Labs + Imaging

- ESR/CRP
- RF
- ANA
- CXR

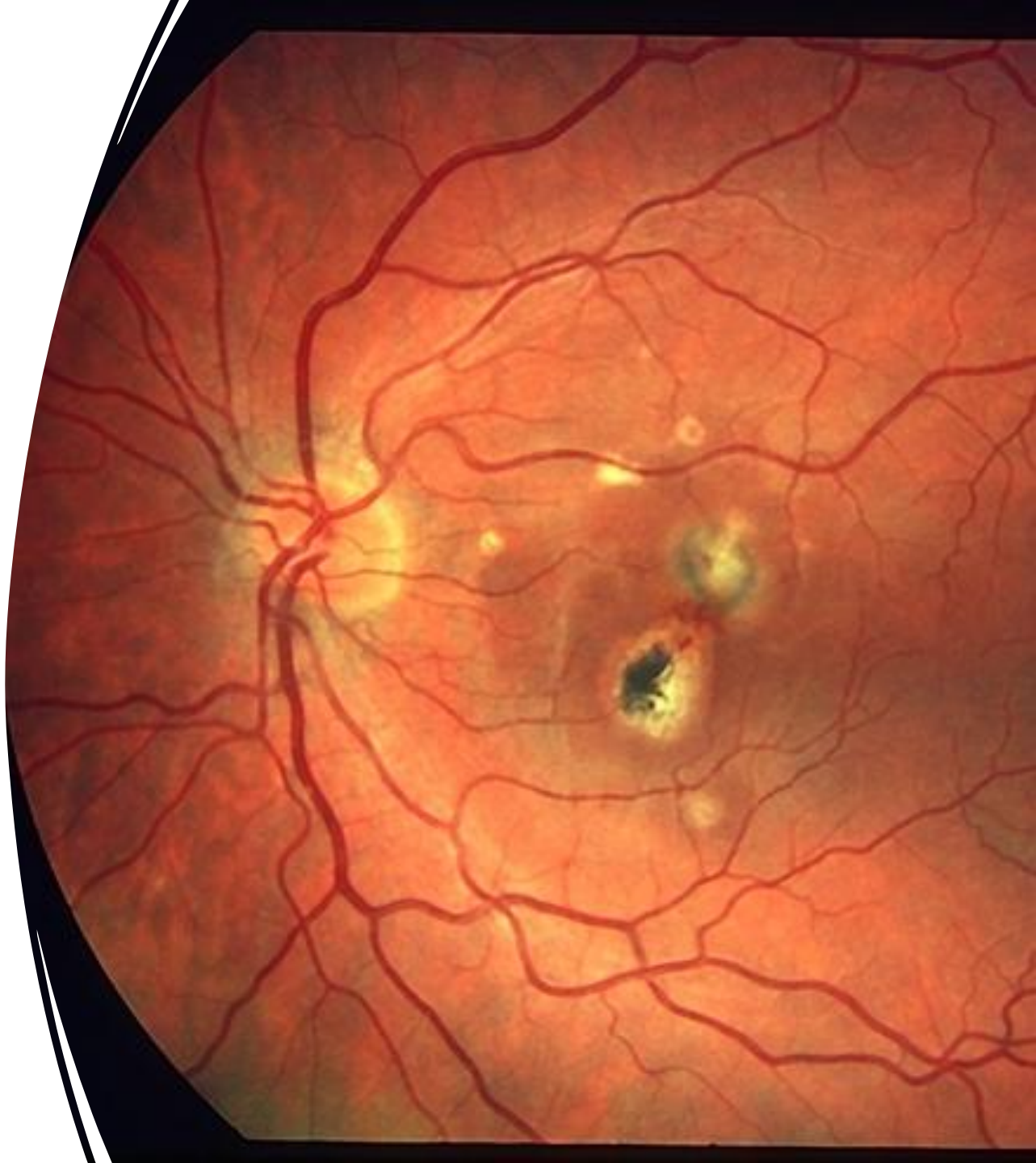
- QTF-TB Gold
- *T. pallidum* screening cascade
- Toxo serologies

Punctate Inner Choroidopathy

Inflammatory multifocal chorioretinal disorder
Predominantly affects young, white, myopic, and otherwise healthy, females
Usually bilateral, but generally asymmetric
Presenting symptom usually scotoma or central Va loss, but often found incidentally
Most common complication is CNV

Typical exam

- Generally - AC, +/- minimal vitritis
- 100–200 µm yellow lesions at the RPE-choroid interface
- Punched-out appearance when inactive
- Rarely extend past zone I
- Hyper-autofluorescent rim around lesions are generally considered active



Etiology and nature

- Proposed to be a variant of MFC or myopic degeneration
- Its inflammatory nature has been put into question in the past
- Electron microscopy of CNVM samples from PIC patients found significant lymphocytes at the inner choroid with sparring of the choriocapillaris

Surgical management and ultrastructural study of choroidal neovascularization in punctate inner choroidopathy after bevacizumab

Sophia I Pachydaki [1], Frederick A Jakobiec, Pooja Bhat, Lucia Sobrin, Norman A Michaud, Surya V Seshan, Donald J D'Amico

Pathophysiology

- Emerging hypothesis describes a pre-established inflammatory process at the choroid with a subsequent, unrelated, event that destabilizes Bruch's membrane

Punctate inner choroidopathy reactivation following COVID-19: A case report

Michele Nicolai [1], Maria Jolanda Carpenè [1], Nicola Vito Lassandro [1], Paolo Pelliccioni [1], Vittorio Pirani [1], Alessandro Franceschi [1], Cesare Mariotti [1]

Punctate inner choroidopathy immediately after COVID-19 infection: a case report

Manabu Miyata [1], Sotaro Ooto [2], Yuki Muraoka [2]

Management

Without CNV

- Visual prognosis is excellent
- Observant management unless there's macular threat

If so:

- Consider systemic steroid taper into IMT for steroid-sparing therapy
- Many options for IMT, but generally MMF (1-3g QD) has evidenced success
- Given lack of systemic disease, intraocular implants are an option, but predominantly phakic population limits it as initial therapy

With CNV

- Bevacizumab
  - Some studies suggest good initial response, but resistance eventually develops
- Ranibizumab, approved for myopic-CNV
- Aflibercept, etc.

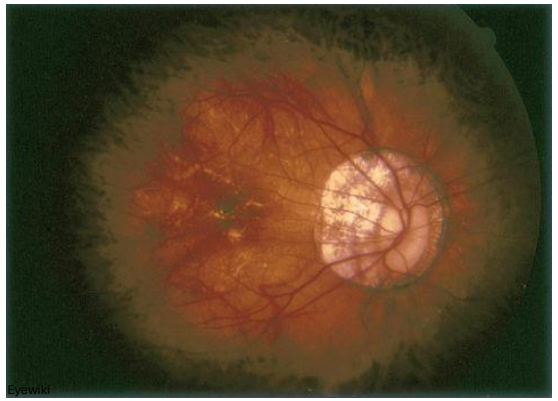
Long-Term Analysis of Clinical Features and Treatment Outcomes of Inflammatory Choroidal Neovascularization

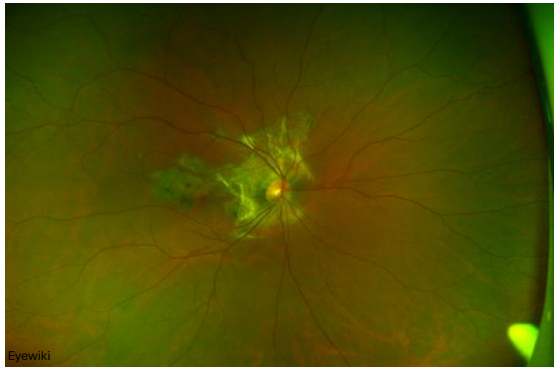
Mirinae Kim [1], Junhyuck Lee [2], Young-Gun Park [1], Young-Hoon Park [3]

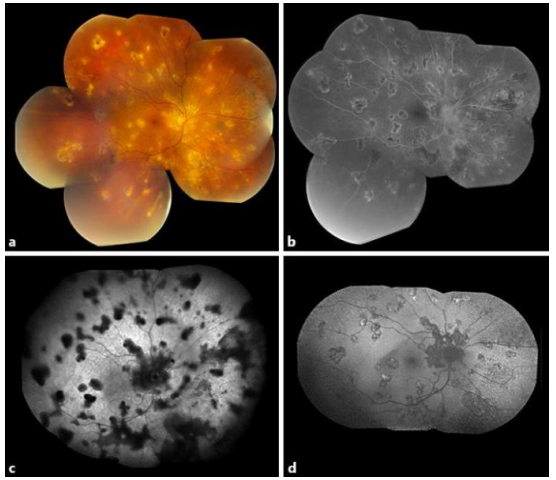
Conclusions: Inflammatory CNV recurrence showed higher rates over time after anti-VEGF treatment than previously reported, even though the overall visual outcome was good. Baseline BCVA and RPEA after treatment are significant predictors for visual outcome. Intraretinal HRF after anti-VEGF treatment suggests the potential risk of recurrence.

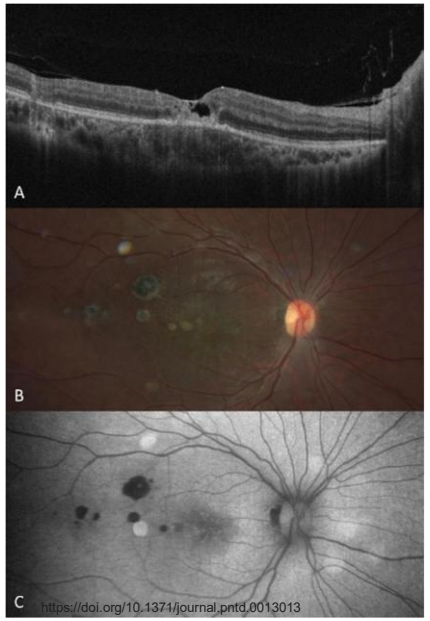
Back to our pt.

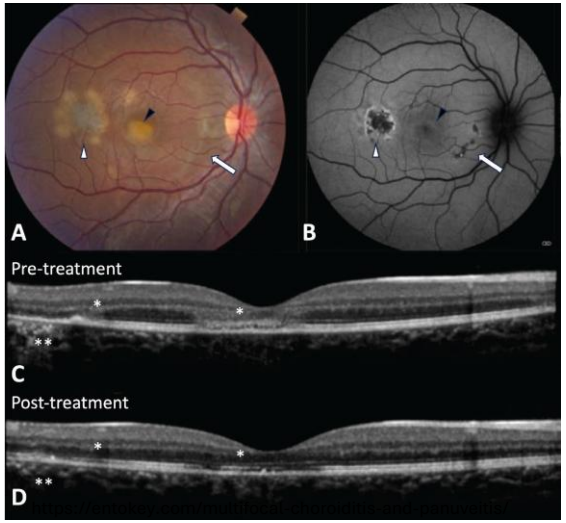
- Observation vs IMT offered
- Initially chose observation but started steroid taper and MMF 2g at first follow-up
- ~6 months after initial, she had to stop MMF due to back surgery
- A new lesion appeared after 3 months off MMF, restarted it at same dose
- ~15 months after initial, developed a new lesion OD, MMF increased to 2.5g
- 2 years after initial she developed CNV, trialed bevacizumab + IMT switch to ADA











Differentials

References

- Patel KH, Birnbaum AD, Tessler HH, Goldstein DA. Presentation and outcome of patients with punctate inner choroidopathy at a tertiary referral center. Retina. 2011 Jul-Aug;31(7):1387-91. doi: 10.1097/IAE.0b013e3182069a8f. PMID: 21478811
- Turkcuoglu P, Chang PY, Rentiya ZS, Channa R, Ibrahim M, Hatef E, Sophie R, Sadaka A, Wang J, Sepah YJ, Do DV, Foster CS, Nguyen QD. Mycophenolate mofetil and fundus autofluorescence in the management of recurrent punctate inner choroidopathy. Ocul Immunol Inflamm. 2011 Aug;19(4):286-92. doi: 10.3109/09273948.2011.580072. PMID: 21770809.
- Pachydaki SI, Jakobiec FA, Bhat P, Sobrin L, Michaud NA, Seshan SV, D'Amico DJ. Surgical management and ultrastructural study of choroidal neovascularization in punctate inner choroidopathy after bevacizumab. J Ophthalmic Inflamm Infect. 2012 Mar;2(1):29-37. doi: 10.1007/s12348-011-0050-x. Epub 2011 Nov 27. PMID: 22120962; PMCID: PMC3302998.
- Nicolai M, Carpenè MJ, Lassandro NV, Pelliccioni P, Pirani V, Franceschi A, Mariotti C. Punctate inner choroidopathy reactivation following COVID-19: A case report. Eur J Ophthalmol. 2022 Jul;32(4):NP6-NP10. doi: 10.1177/11206721211028750. Epub 2021 Jul 3. PMID: 34219492; PMCID: PMC9294619.
- Miyata M, Ooto S, Muraoka Y. Punctate inner choroidopathy immediately after COVID-19 infection: a case report. BMC Ophthalmol. 2022 Jul 7;22(1):297. doi: 10.1186/s12886-022-02514-8. PMID: 35799141; PMCID: PMC9260973.
- Sugawara E, Machida S, Fujiwara T, Kurosaka D, Hayakawa M. Punctate inner choroidopathy in mother and daughter. Jpn J Ophthalmol. 2010 Sep;54(5):505-7. doi: 10.1007/s10384-010-0835-8. Epub 2010 Nov 5. PMID: 21052920.
- Atan D, Fraser-Bell S, Plskova J, Kuffová L, Hogan A, Tufail A, Kilmartin DJ, Forrester JV, Bidwell JL, Dick AD, Churchill AJ. Punctate inner choroidopathy and multifocal choroiditis with panuveitis share haplotypic associations with IL10 and TNF loci. Invest Ophthalmol Vis Sci. 2011 Jun 1;52(6):3573-81. doi: 10.1167/iovs.10-6743. PMID: 21357402.
- Punctate inner choroidopathy: vision loss–causing disease. Choroida Educate. 2023 Aug 17 [cited 2026 Apr 12]. Available from: https://educate.choroida.com/2023/08/17/punctate-inner-choroidopathy-vision-loss-causing-disease/
- Foster CS, Anesi SD, Chang PY, editors. *Uveitis: A quick guide to essential diagnosis*. Cham (Switzerland): Springer Nature; 2020. doi:10.1007/978-3-030-52974-1.
- Paquentín-Jiménez R, Rivera-Sempértegui R, Concha-Del-Río LE (2025) Small but threatening: Punctate Outer Retinal Toxoplasmosis (PORT), a case series report. PLoS Negl Trop Dis 19(4): e0013013. https://doi.org/10.1371/journal.pntd.0013013