

Neuro-ophthal alumni

14/4/2014

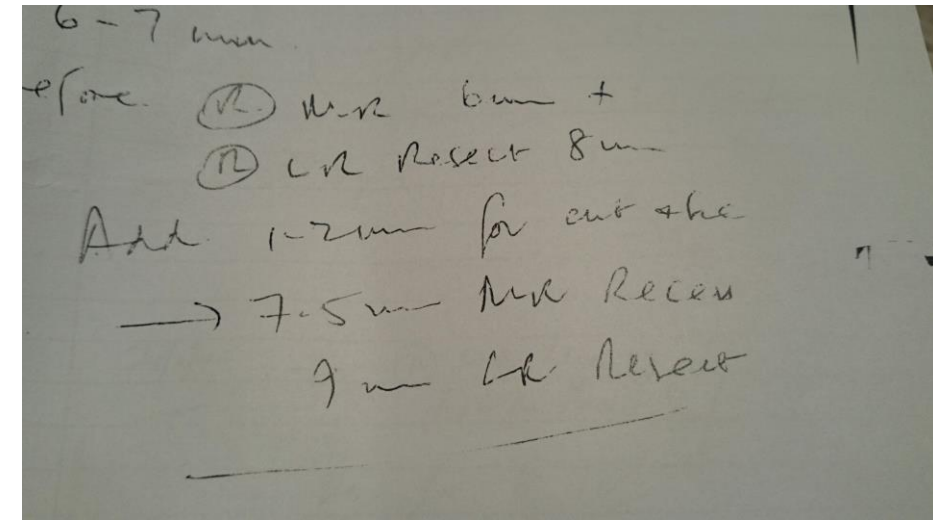
Shivanand Sheth
Ocular Motility Fellow

Old history

- 44 year old Male

1985

- Presented to RVEEH in 1985 (14 years old) to Ocular Motility with RET 45Δ
- Anisometropic:
 - Right eye: BCVA 6/24 (-8.00/+3.50 x 165)
 - Left eye: BCVA: 6/6 (-0.5/+0.75 x 15)
- Right eye: Resess + Resect strabismus surgery



Old history

1986

- Diagnosed: Right eye Keratoconus with scarring - put on PKP waitlist

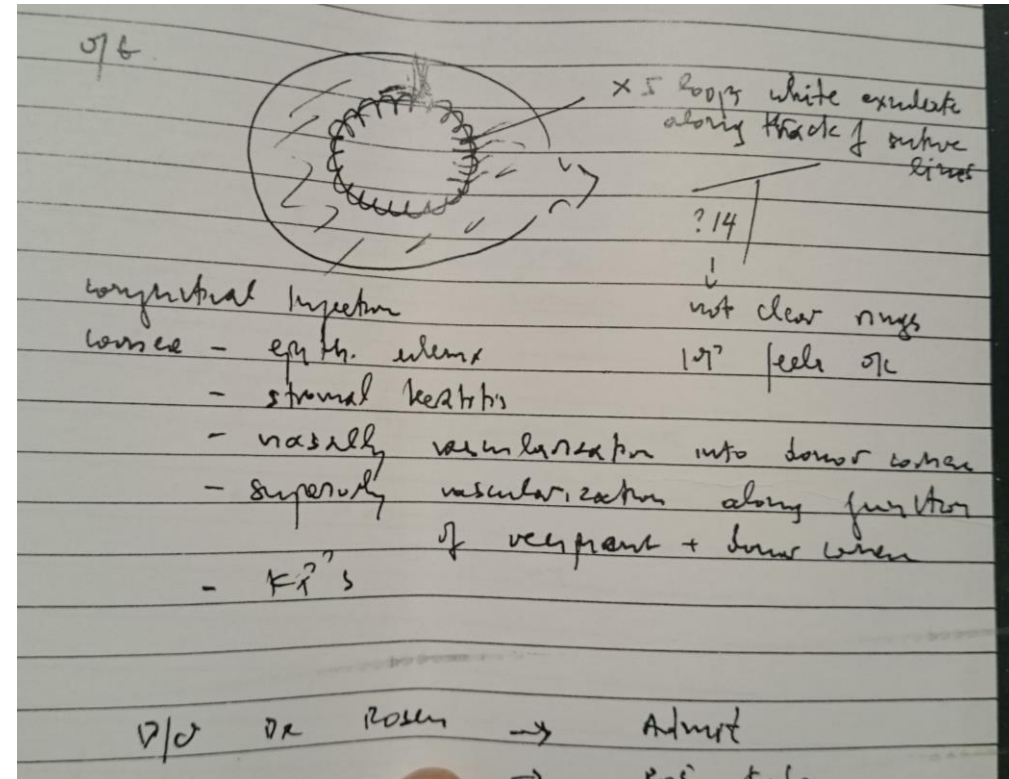
March 1987

- Had penetrating keratoplasty – Vision post-surgery without glasses documented as **6/12**

Old history

March 1988

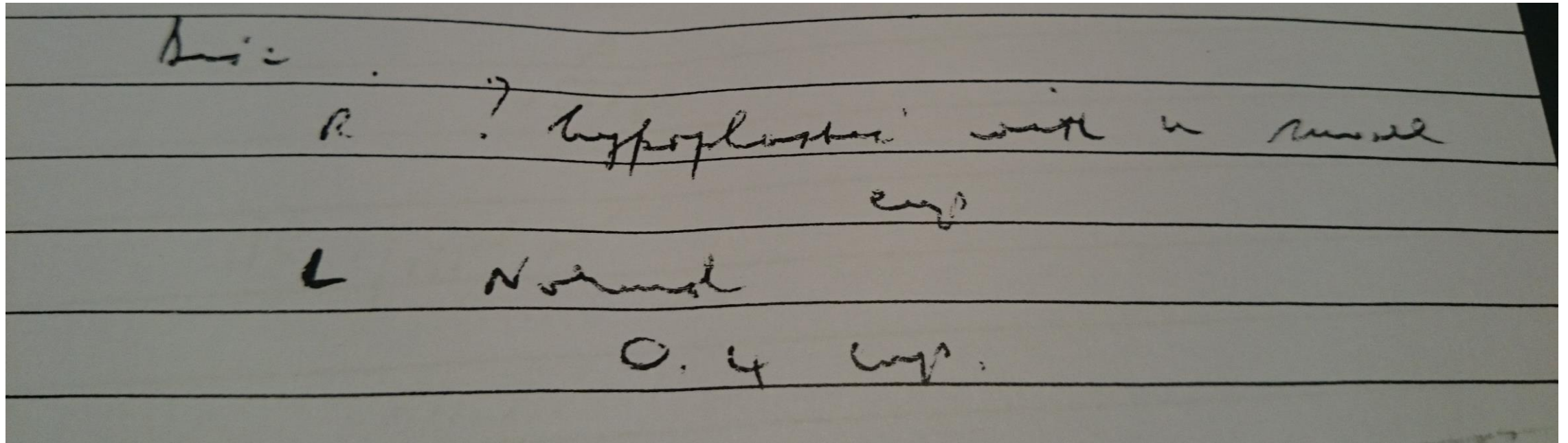
- Back with Right Red Eye
- **Vision: 6/60**
- Graft Rejection: Epithelial edema, stromal keratitis, vascularization into donor cornea
- Was admitted and started on intensive steroids



Old history

August 1988

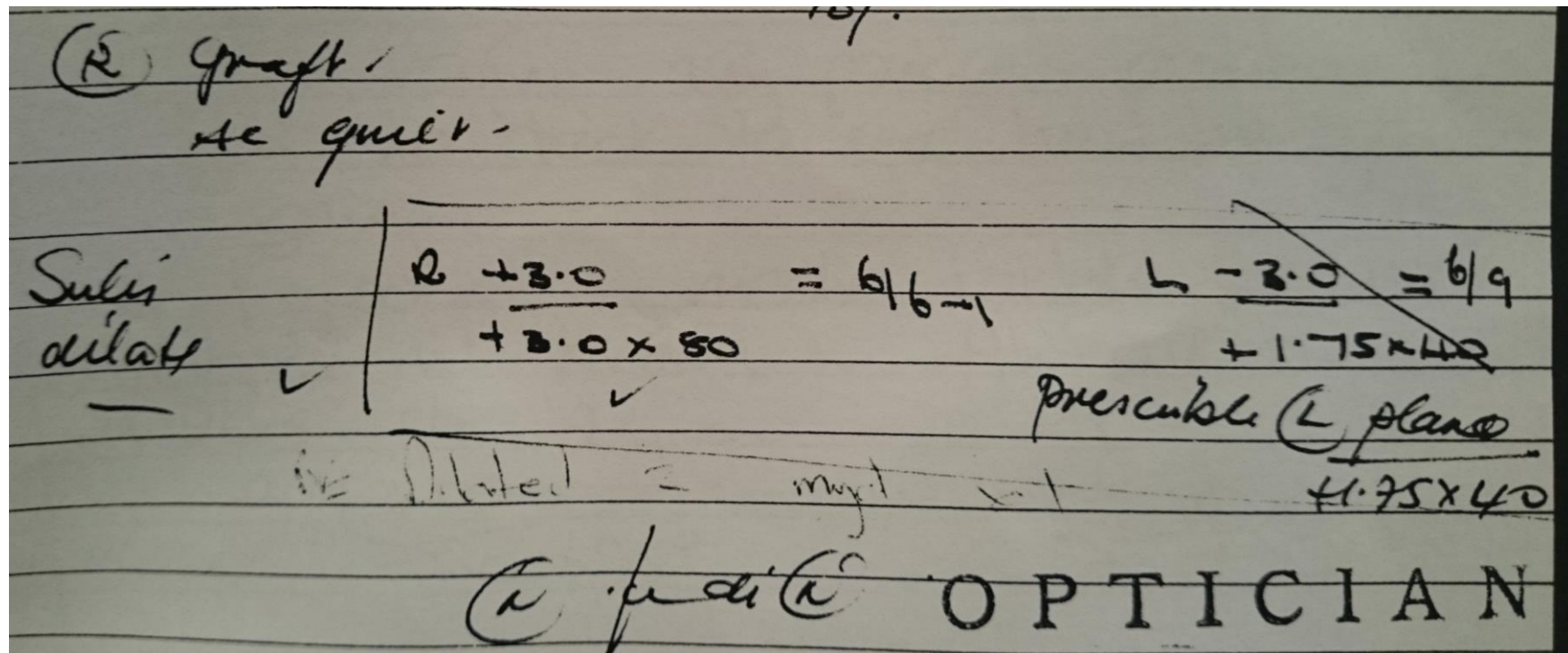
- **Vision: 6/12**, quiet comfortable eye
- Right Optic disc Comment: ? Hypoplastic with small cup



Old history

Jan 1989

- **Vision:** RE 6/6 with +3.00/+3.00x 80
LE 6/9 with -3.0/+1.75 x 40
- **Fundus : Normal**



Old history

August 1994

- **RE: 6/9** (+3.00/+1.00x95)
- Left Eye 6/12 (-4.50/+2.25x20)
- Advised to try contact lens

Seen in cornea 2006 – 2008

- Vision:
 - **Right Eye with CL: 6/6, HM without**
 - Left Eye with CL: 6/6
 - *Few comments with respect to dilated pupil*

New History

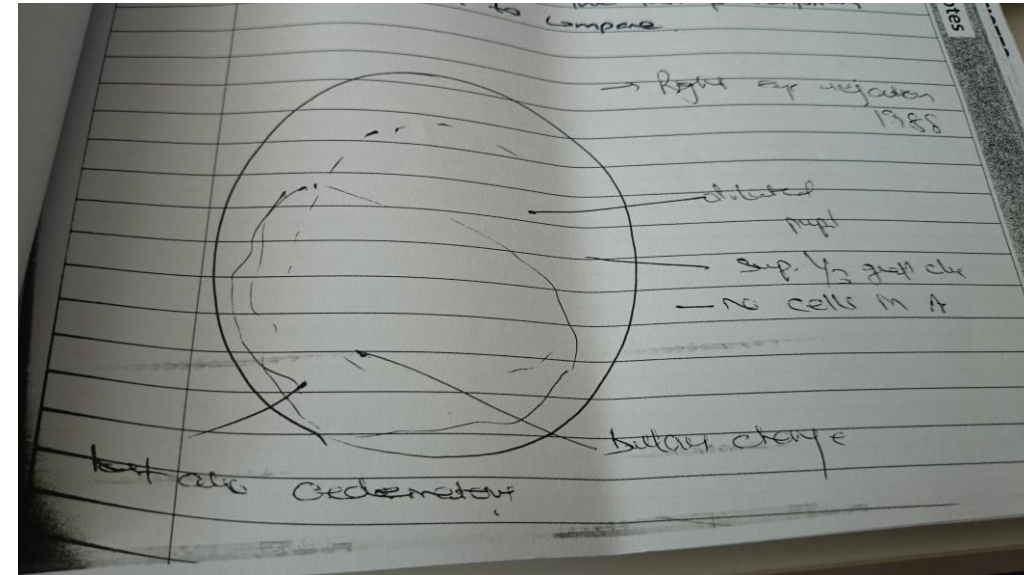
October 2013:

- Went to pvt. ophthalmologist with painful red right eye.
- Vision: **Right Eye: PL**, Left Eye: 6/18 → ph 6/9
- Diagnosed as right corneal graft rejecton and started on Pred forte + chlorsig
- No improvement in 2 weeks, with corneal edema → referred to RVEEH

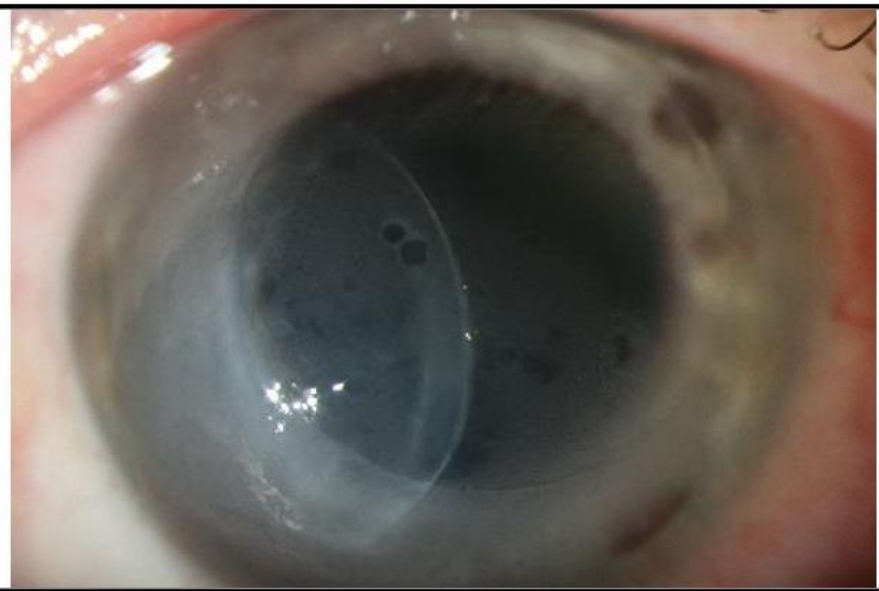
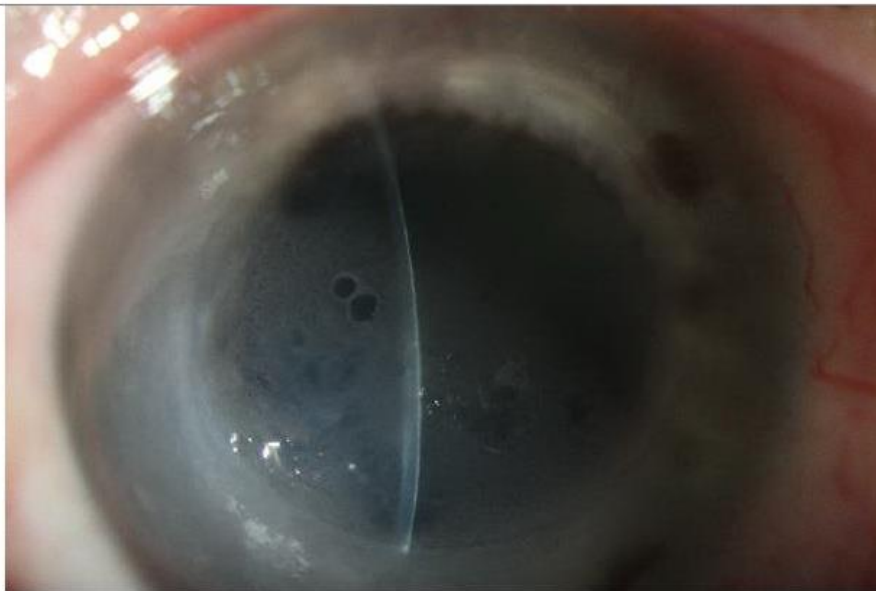
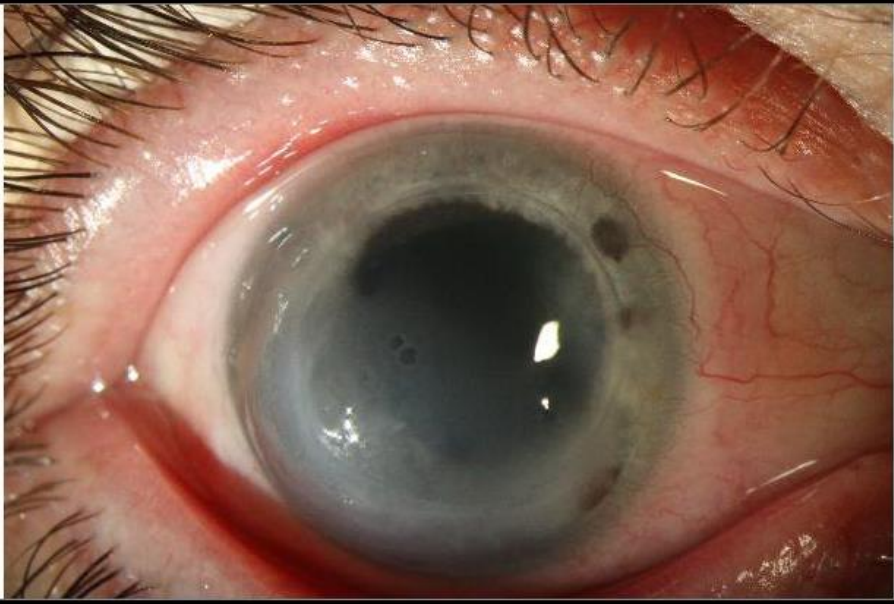
New History

Dec 2013 -Jan 2014:

- Seen at RVEEH cornea clinic
 - Considered ? Graft ectasia/ hydrops in graft
- Tapered off prednisolone
- **Pupil dilated noted**
- “Severe visual loss not explained by appearance of cornea, retina or optic nerve”
- Advised CT brain
- Referred to Neuro-ophthalmology Clinic



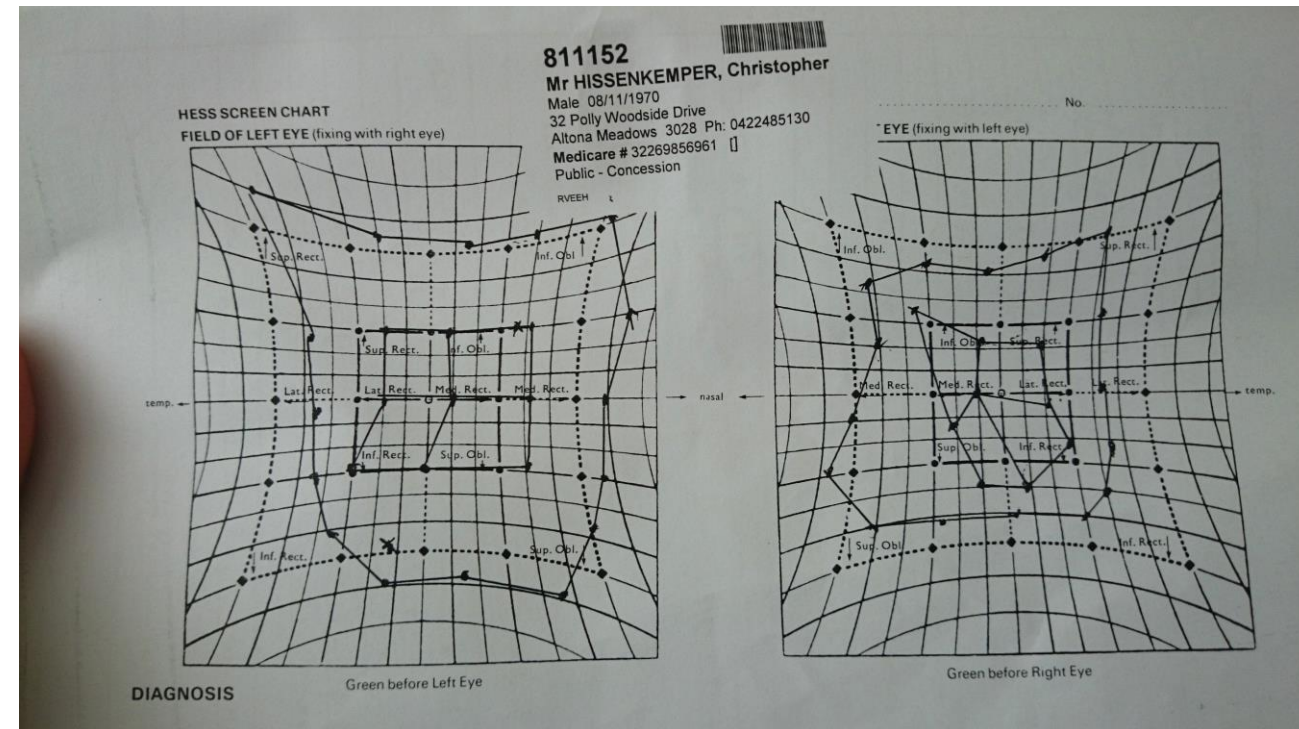
Cornea Photos

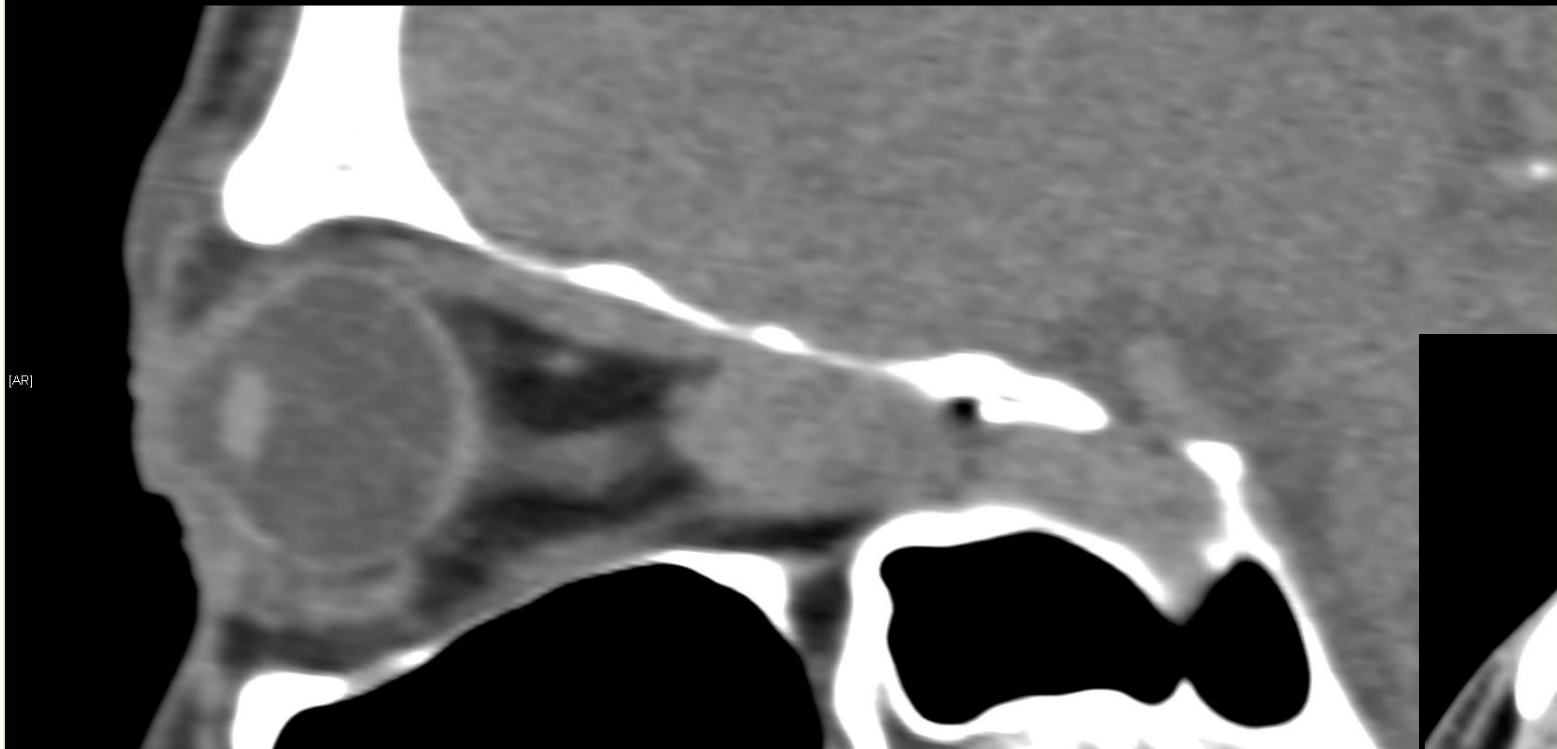


New History

Jan - Feb 2014

- CT scan report showed orbital apex tumour extending through superior orbital fissure ?
Lymphoma/pseudotumour
- MRI advised
- Seen in Neuro-ophthal Clinic:
 - Dilated Pupil - ? 3rd nerve
 - Noted to have RE RAPD
 - RE Vision NPL
 - RE optic disc Pale





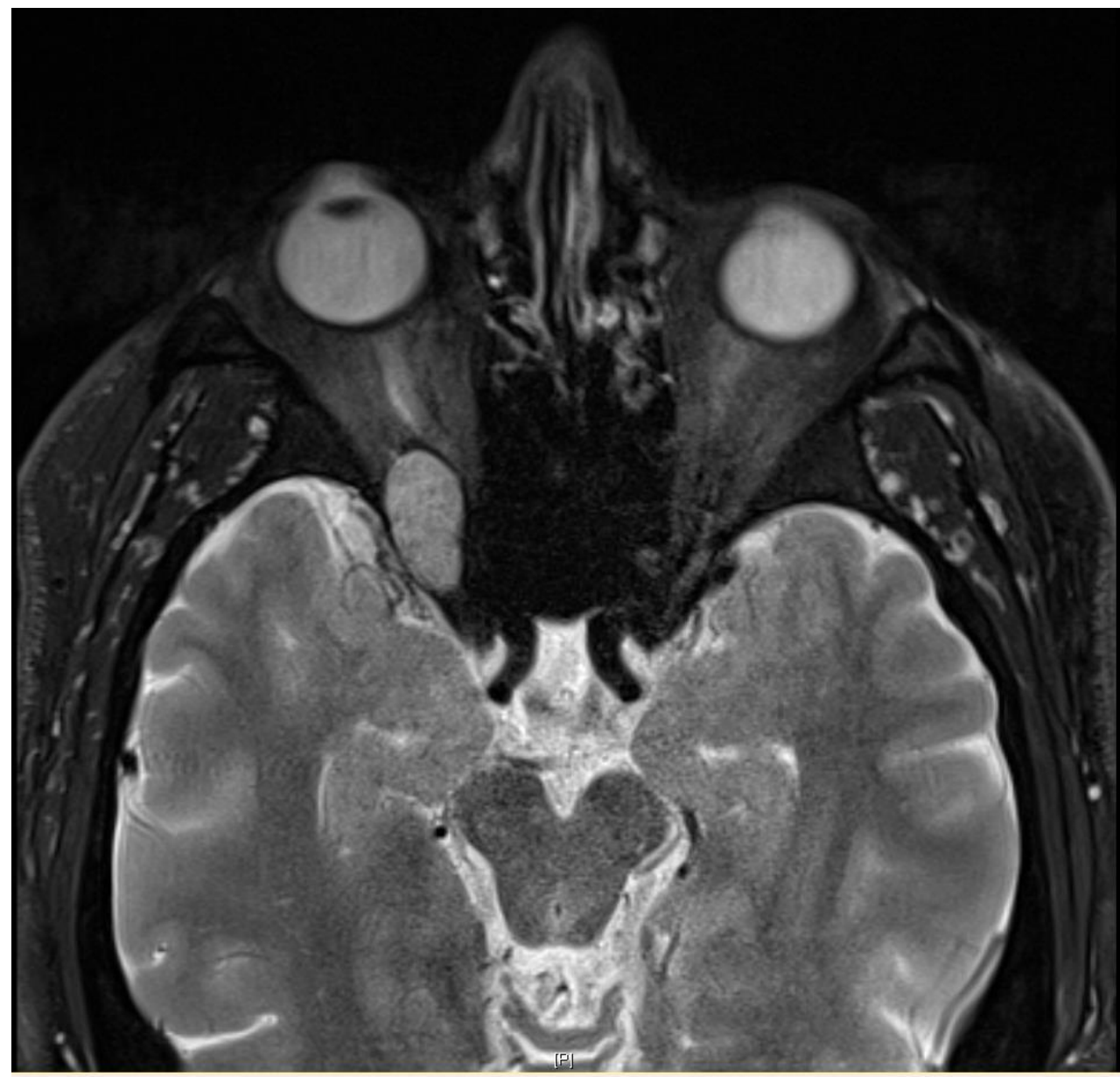
CT Scan



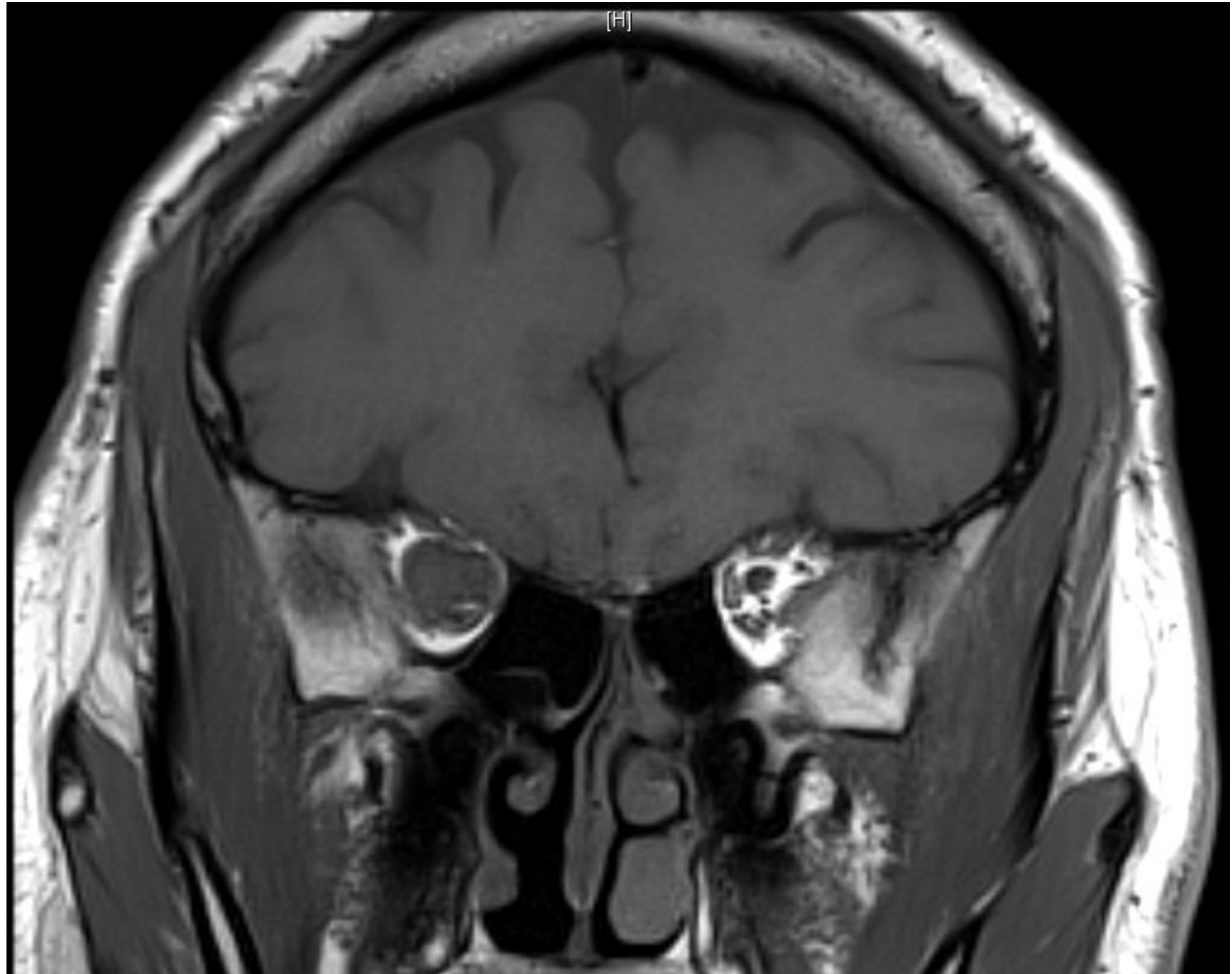
MRI report

- Well defined mass in Orbital apex of right eye arising from 3rd Nerve
→ Large nerve sheath tumour compressing optic nerve with ?
Intracranial extension to cavernous sinus through superior orbital fissure
- Referred to OPAL + Neurosurgery for opinion

MRI



MRI



Visual fields

Single Field Analysis

Name: HISENKEMPER CHRISTOPHER
ID: 811152

Eye: Right
DOB: 08-11-1970

Central 24-2 Threshold Test

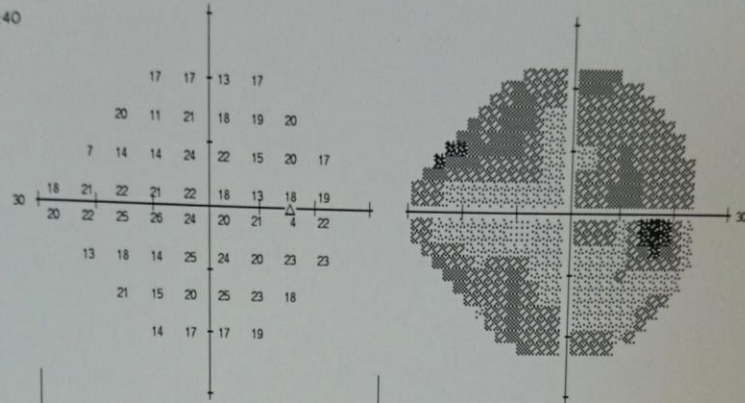
Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 2/13
False POS Errors: 10 %
False NEG Errors: 17 %
Test Duration: 06:40

Stimulus: III, White
Background: 31.5 ASB
Strategy: SITA-Fast

Pupil Diameter:
Visual Acuity:
RX: +1.25 DS DC X

Date: 12-03-2014
Time: 3:48 PM
Age: 43

Fovea: OFF



-11	-11	-15	-10
-10	-20	-9	-12
-23	-17	-19	-8
-10	-9	-10	-12
-9	-9	-7	-10
-17	-14	-19	-8
-10	-17	-12	-7
-16	-14	-14	-12

Total Deviation

-3	-3	-7	-2
-2	-12	-1	-4
-15	-9	-10	0
-2	-1	-3	-3
0	0	1	1
-9	-5	-10	0
-1	-9	-4	1
-7	-6	-6	-3

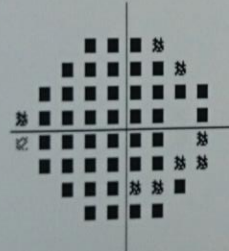
Pattern Deviation

GHT
Outside Normal Limits

VFI 78%

MD -12.20 dB P < 0.5%

PSD 4.02 dB P < 0.5%



◻ < 5%
◻ < 2%
◻ < 1%
◼ < 0.5%

Restarted again.

Eye: Left

Name: HISENKEMPER CHRISTOPHER
ID: 811152

DOB: 08-11-1970

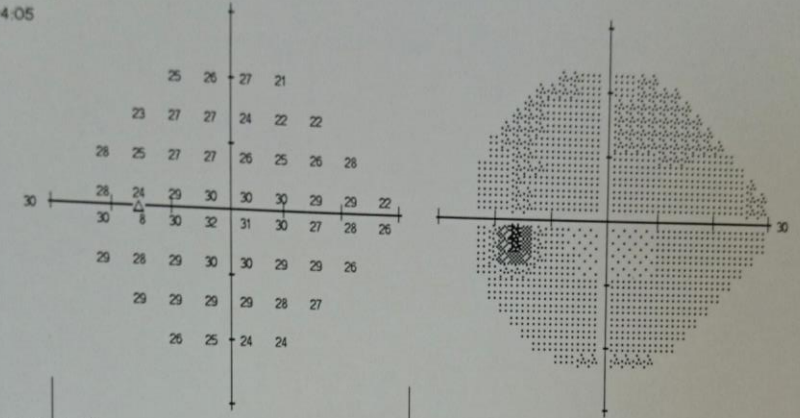
Central 24-2 Threshold Test

Fixation Monitor: Gaze/Blind Spot
Fixation Target: Central
Fixation Losses: 2/10 xx
False POS Errors: 10 %
False NEG Errors: 3 %
Test Duration: 04:05

Stimulus: III, White
Background: 31.5 ASB
Strategy: SITA-Fast

Pupil Diameter:
Visual Acuity:
RX: +0.00 DS +2.25 DC X 10
Date: 12-03-2014
Time: 3:58 PM
Age: 43

Fovea: OFF



-3	-2	-1	-8
-6	-2	-3	-7
-2	-5	-4	-5
-2	-4	-3	-3
-1	-3	-2	-2
-2	-3	-4	-3
-2	-2	-3	-4
-5	-5	-7	-6

Total Deviation

0	0	1	-6
-4	0	-1	-5
0	-3	-2	-3
0	-2	-1	-1
1	-1	0	-1
0	-1	-2	-1
0	0	-1	-2
-3	-3	-5	-4

Pattern Deviation

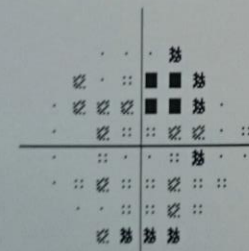
*** Low Test Reliability ***

GHT
Outside Normal Limits

VFI 97%

MD -3.92 dB P < 1%

PSD 1.87 dB P < 5%



◻ < 5%
◻ < 2%
◻ < 1%
◼ < 0.5%

Restarted twice

↳

Case discussed at neuro-radiology meet

- Aim?
 - If to preserve vision: Neurosurgery +OPAL could go into orbit + cavernous sinus to remove tumour
 - ? Life threatening
- RE Vision NPL, but some optic disc tissue ? Healthy

Plan:

- OCT to check assess ON fibres and RNFL thickness to check prognosis

OCT done – diffuse NFL thinning RE

Alumni Discussion

- What next?
- Plan? Next step? Surgery/observe?
- Lot of subjective variability in reporting optic nerve appearance – hypoplastic/pale/not pale - any way to standardize clinically?
- Keep mind open for all possible underlying problems – possibly missed/ignored pupil findings over the years.
- Even in face of obviously visible cornea and anterior segment pathology, dilated pupils can be missed especially after Corneal graft
- Urret's Zavalia syndrome – Can confound pupillary findings by causing fixed dilated pupil – is there a way to differentiate?

- Thank you