

Live Educational Event (LEE): Getting ready to tackle eye emergencies!

Section 1: Neuro-Ophthalmology

What not to miss in neuro-ophthalmology - part 2

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CLINICAL CASE I

ID & PAST HISTORY



- 48-year-old
- Past medical history:
 - Chronic lymphocytic leukemia (CLL) 2 years before (FISH with trisomy 12)
 - Body mass index of 28.86 kg/m²
 - Arterial hypertension
 - Dyslipidemia
- Medication: telmisartan; pitavastatin

HISTORY OF PRESENT ILLNESS



2-week

Vision loss in the left eye + mild retrobulbar discomfort + dyschromatopsia

CLINICAL CASE I

PHYSICAL EXAMINATION



OD		OS
10/10	VA (Snellen acuity chart)	CF at 30cm
Normal	PUPILS	RAPD
Normal	MOTILITY	Normal
Normal	LIDS	Normal
Normal	CONJUNCTIVA	Normal
Clear	CORNEA	Clear
D&Q	A/C	D&Q
Clear	LENS	Clear
Normal	IOP	Normal
Normal	FUNDOSCOPY	Optic disc edema

CLINICAL CASE I

QUESTION 1

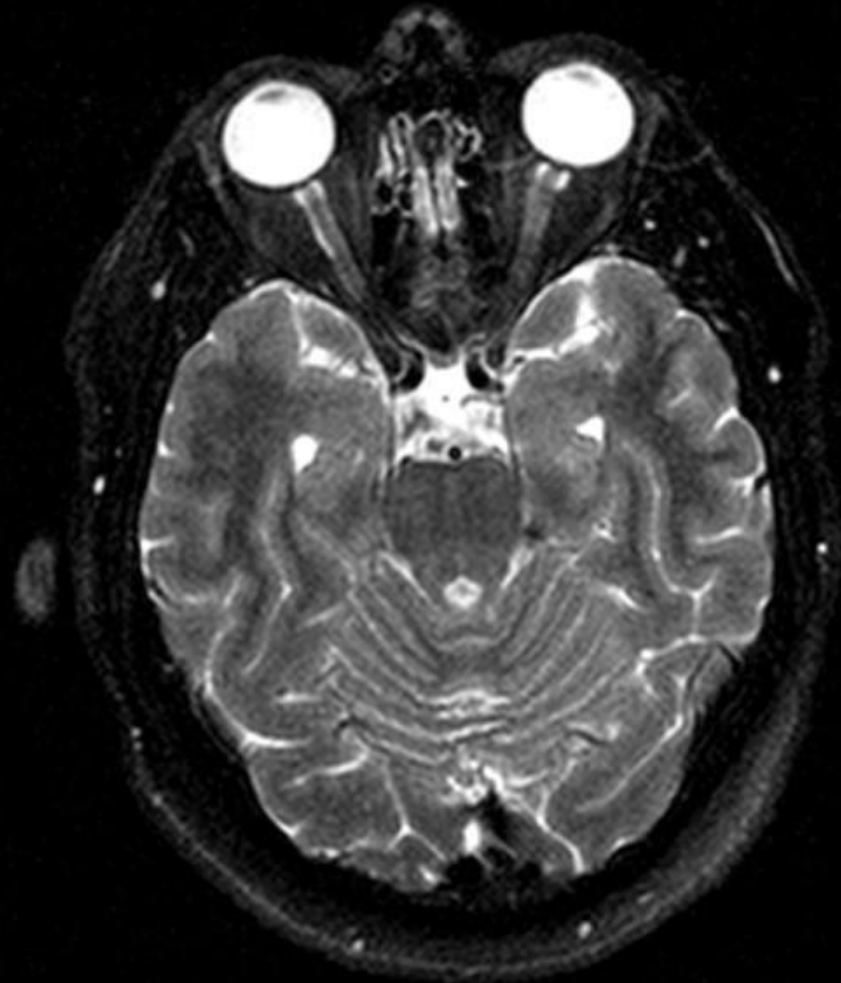


How to proceed?

1. Brain MRI
2. OCT + VF
3. Blood tests
4. Call the neurologist for LP
5. All the anteriors 

CLINICAL CASE I

COMPLEMENTARY TESTS: BRAIN MRI



- Hyperintense signal in the left optic nerve

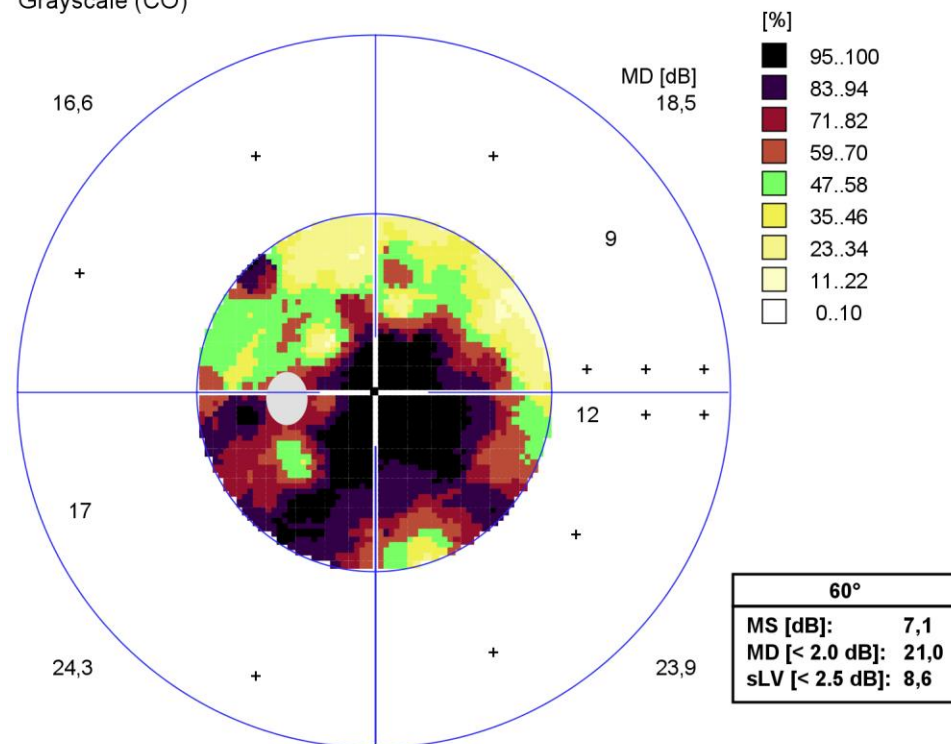
CLINICAL CASE I

COMPLEMENTARY TESTS: VISUAL FIELD



Left eye (OS) / 19-11-2018 / 10:21:10

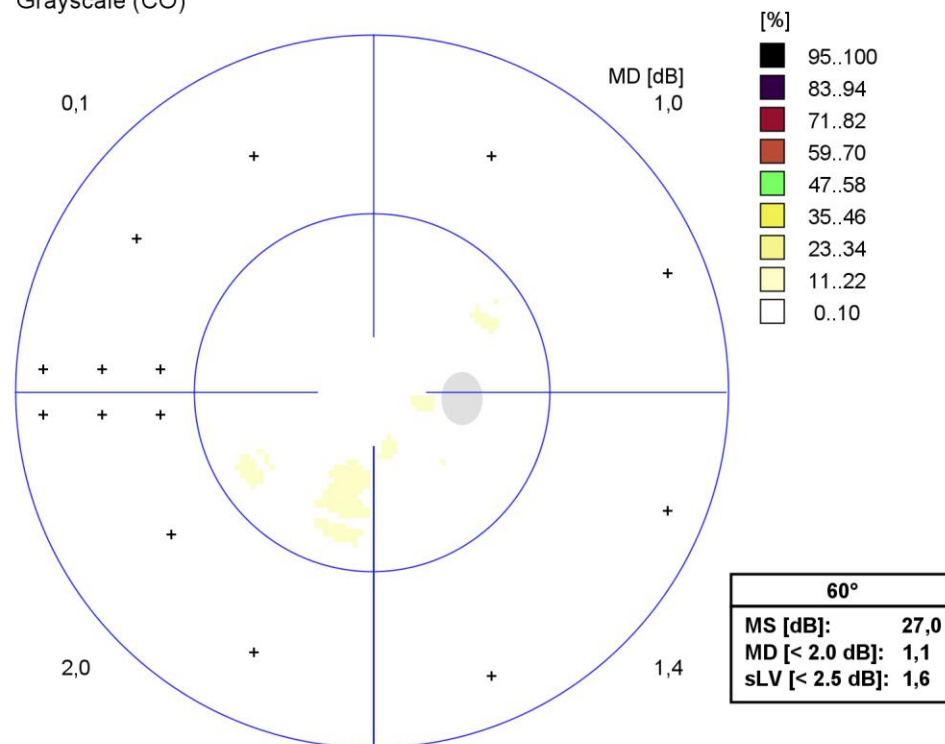
Grayscale (CO)



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Refraction S/C/A: -2.0/-1.25/160 VA [m]:
Pupil [mm]: 4.72 IOP [mmHg]:
NV: T11 V2.1

Right eye (OD) / 19-11-2018 / 10:13:05

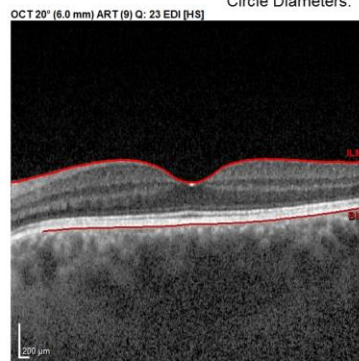
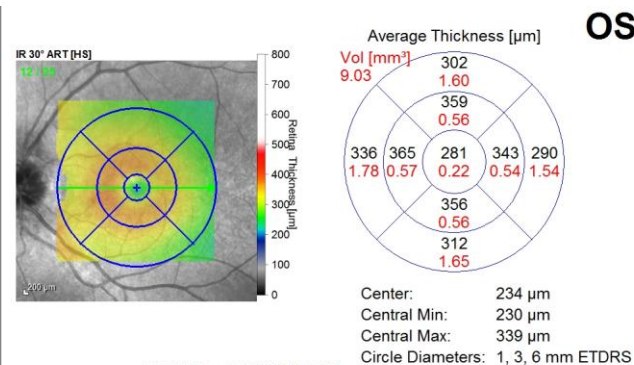
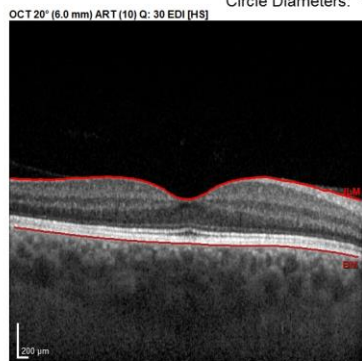
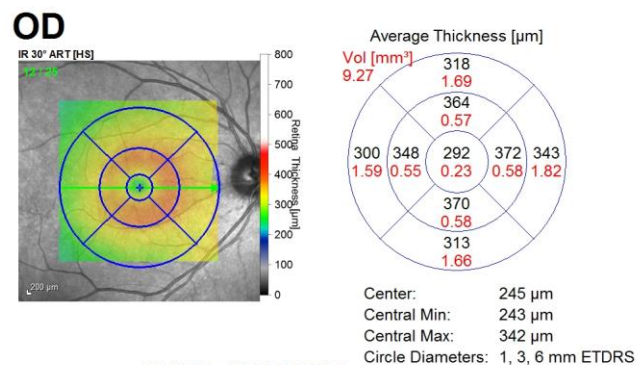
Grayscale (CO)



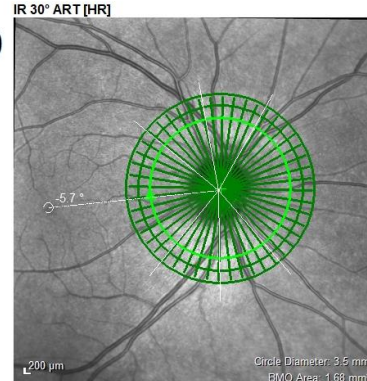
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Pupil [mm]: 5.09 IOP [mmHg]:
NV: T11 V2.1

CLINICAL CASE I

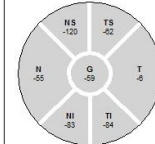
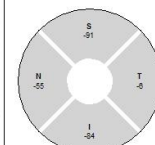
COMPLEMENTARY TESTS: OCT



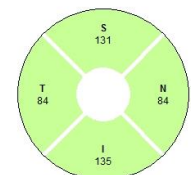
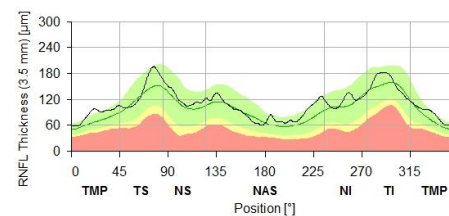
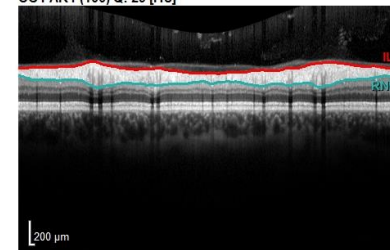
OD



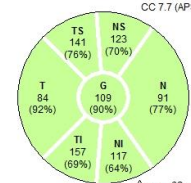
**Asymmetry
OD - OS**



OCT ART (100) Q: 29 [HS]



CC 7.7 (APS)

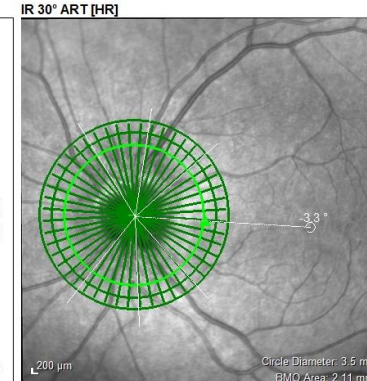


Δ_{BMO} 62 μm

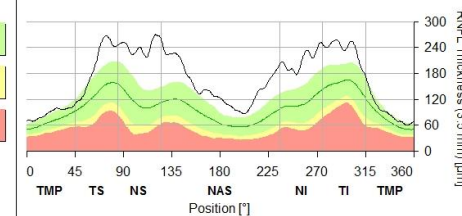
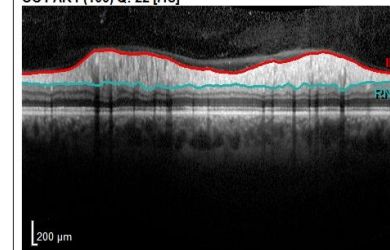
Classification OD

Within Normal Limits

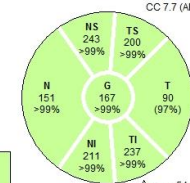
OS



OCT ART (100) Q: 22 [HS]



CC 7.7 (APS)



Δ_{BMO} 54 μm

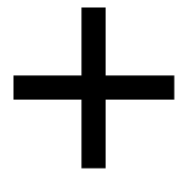
Classification OS

Within Normal Limits

CLINICAL CASE I

CASE SUMMARY

- Male
- 48-year-old
- Unilateral vision loss + retrobulbar pain + dyschromatopsia
- RAPD
- Optic disc edema
- Central/cecocentral scotoma



Chronic lymphocytic leukemia (CLL) 2 years before

No spontaneous improvement at 2 weeks



CLINICAL CASE I

QUESTION 2



At this point what is the most likely diagnosis?

1. Anterior ischemic optic neuropathy
2. Acute demyelinating optic neuritis
3. Leber's hereditary optic neuropathy
4. Infiltrative optic neuropathy 
5. More information



CLINICAL CASE I

COMPLEMENTARY TESTS: LP

- Opening pressure of 13 cmH₂O
- CSF analysis:
 - No microorganisms
 - Monoclonal population of **B cells CD19+, CD20+, CD5+, CD38-, CD45+**

BLOOD TESTS

Hemoglobin N
WBC 18000 WBC/ml with 67% lymphocytes
Platelets count N
Serologies for infectious and immunologic diseases N
Remaining analytical evaluation N

Leukocytes' morphology:

Compatible with a **chronic lymphoproliferative syndrome.**

CLINICAL CASE I

QUESTION 3



How to proceed now?

1. Acetazolamide
2. Oral prednisone
3. IV methylprednisolone 
4. Intrathecal chemotherapy 
5. None

CLINICAL CASE I

TREATMENT



ONSET

IV methylprednisolone
(5 days, 1000mg/day)

3 WEEKS LATER

No pain
Dyschromatopsia improvement
BCVA 10/10 OD **8/10 OS**
Slight generalized **pallor** of the left optic
disc

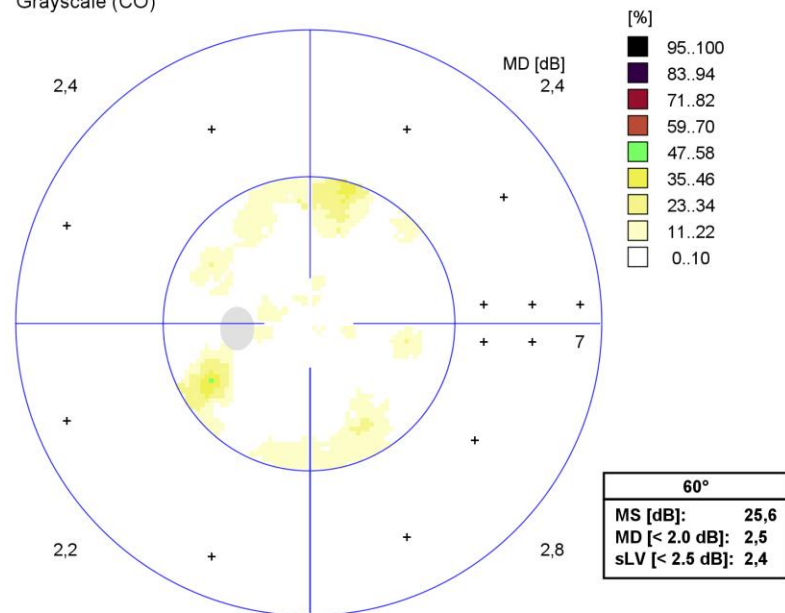
CLINICAL CASE I

FOLLOW-UP

3 WEEKS LATER

Left eye (OS) / 07-12-2018 / 11:06:51

Grayscale (CO)

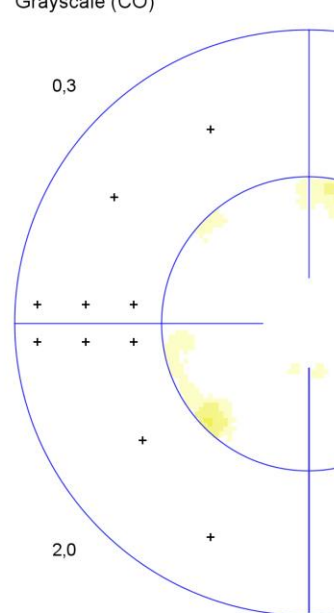


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Catch trials: 0/8 (0%) +, 0/9 (0%) -
Refraction S/C/A: -2.0/-1.25/160
Pupil [mm]: 5.27
NV: T11 V2.1

Questions / repetitions: 169 / 0
Duration: 05:34
RF: 0,0
VA [m]:
IOP [mmHg]:

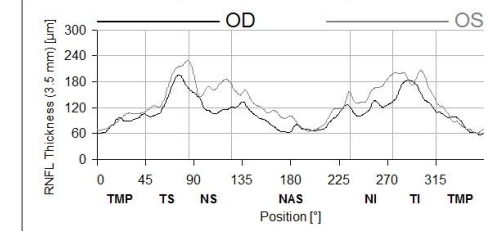
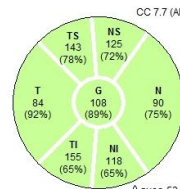
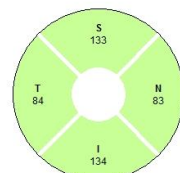
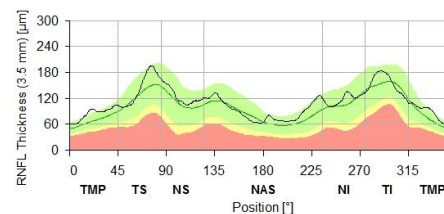
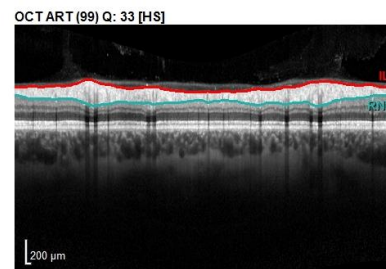
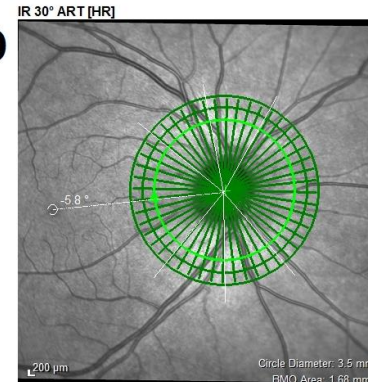
Right eye (OD) / 07-12-2018 / 10:

Grayscale (CO)



Programs: G Standard White/White /
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Refraction S/C/A: -2.0/-1.0/25
Pupil [mm]: 4.84
NV: T11 V2.1

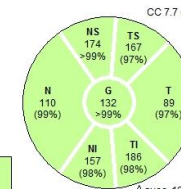
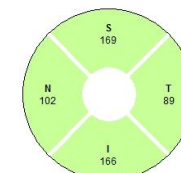
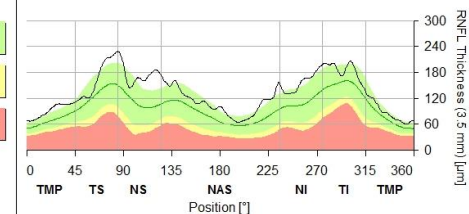
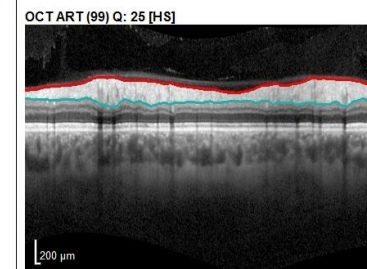
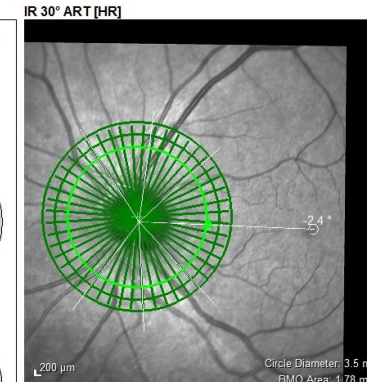
OD



Classification OD

Within Normal Limits

OS



Classification OS

Within Normal Limits

CLINICAL CASE I

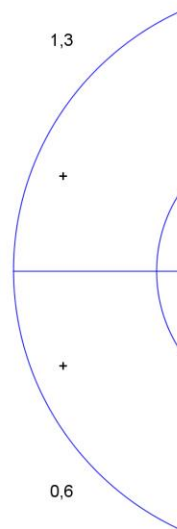
FOLLOW-UP

TREATMENT

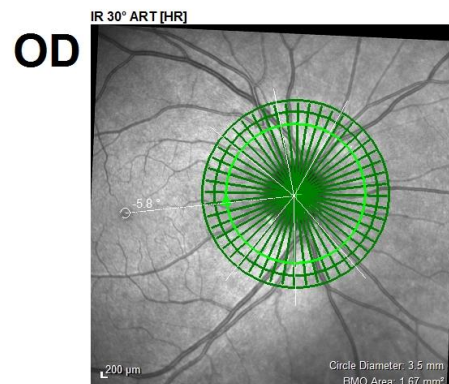
4 cycles of intrathecal therapy (IT) with dexamethasone and methotrexate.

4 MONTH

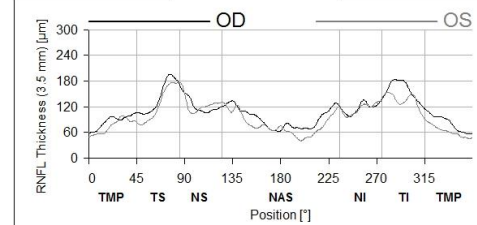
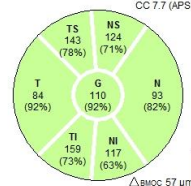
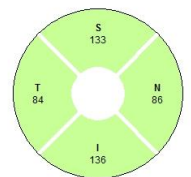
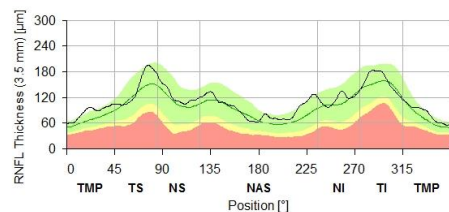
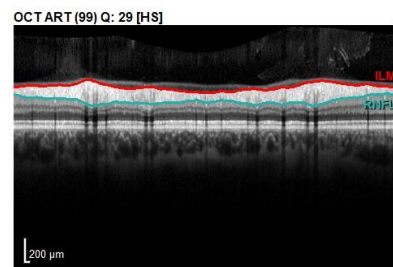
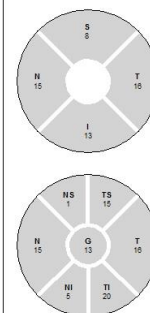
Left eye (OS) / 27
Grayscale (CO)



Programs: G Sla
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Catch trials: 0/8 (0)
Refraction S/C/A: -2.0/-
Pupil [mm]: 5.46
NV: T11 V

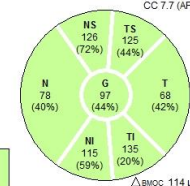
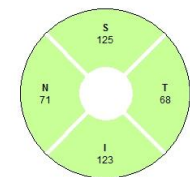
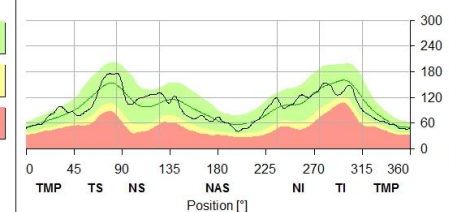
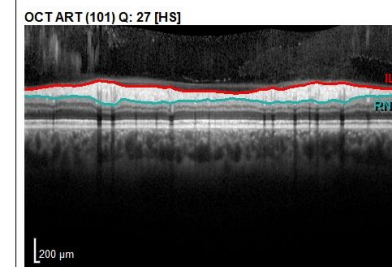
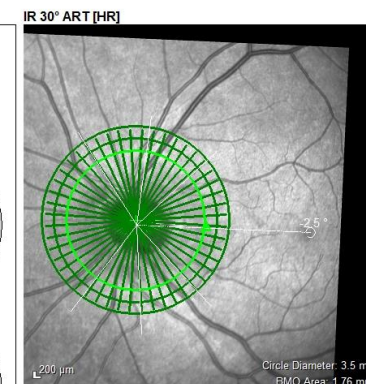


Asymmetry
OD - OS



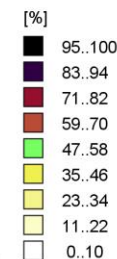
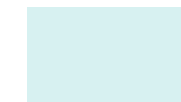
Classification OD

Within Normal Limits



Classification OS

Within Normal Limits



petitions: 154 / 0
04:34
0,0

CLINICAL CASE I

FOLLOW-UP



TREATMENT	4 MONTHS AFTER ONSET
4 cycles of intrathecal therapy (IT) with dexamethasone and methotrexate.	- CSF analysis: Ibrutinib ? No microorganisms Monoclonal population of B cells CD19+, CD20+, CD5+, CD38-, CD45+ - Mitochondrial DNA analysis (MT-ND1, MT-ND4 and MT-ND6) m.4216T>C variant [MT-ND1]

CLINICAL CASE I

KEY POINTS



DIFFERENTIAL DIAGNOSIS

ACUTE UNILATERAL OPTIC NEUROPATHY

- Anterior Ischemic Optic Neuropathy (AION);
- Aneurysm;
- Vasculitis; autoimmune disorder;
- Neuroretinitis;
- Optic neuritis;
- Leber's hereditary optic neuropathy (LHON)
- Infiltrative Optic Neuropathies: 
 - Tumors
 - Inflammation
 - Infection
- ...

Primary Tumors

- Optic glioma
- Benign/malignant ganglioglioma
- Malignant teratoid medulloepithelioma
- Capillary hemangioma
- Cavernous hemangioblastoma
- Other

Secondary Tumors

- Metastatic carcinoma
- Nasopharyngeal carcinoma and other contiguous tumors
- Lymphoreticular tumors
 - Lymphoma
 - Leukemia
- Other

Infections and Inflammation

- Sarcoidosis
- Idiopathic perioptic neuritis
- Bacteria
- Virus
- Fungi

Optic nerve infiltration by CLL cells is rare

CLINICAL CASE I

KEY POINTS

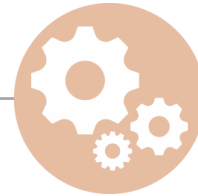


DIAGNOSTIC TESTS

- Magnetic resonance imaging (MRI) of the brain and orbits with fat suppression and gadolinium;
- **Cerebrospinal fluid analysis;**
- Serological studies;
- Optical coherence tomography (OCT)



Conclusive diagnosis of CLL nerve infiltration requires a nerve biopsy.



MECHANISM OF DISEASE

1. CNS invasion from sporadic intracranial **petechial hemorrhages;**
2. Across **perforating vessels** into the subarachnoid space;
3. **Direct extension** from seeded meninges into CSF;
4. Spread through **perineural sheaths** on cranial nerves.



TREATMENT

- Orbital irradiation;
- Intrathecal methotrexate with or without irradiation;
- Systemic chemotherapy.

CLINICAL CASE I

KEY POINTS



Is there any significance of m.4216T>C variant found in MT-ND1 gene?

- Associated with Leber hereditary optic neuropathy (LHON) phenotype;
- Secondary mutation;
- Unclarified pathogenicity.

Synergistic and deleterious effect





CLINICAL CASE II

ID & PAST HISTORY



- 50-year-old
- Past medical history: none.
- Medication: none.

HISTORY OF PRESENT ILLNESS



5-hours

SUDEN ONSET of severe headache + global aphasia + right hemiplegia and hemihypesthesia



7-days before

Headache and aphasia with spontaneous resolution

CLINICAL CASE II

QUESTION 4



How to proceed?

1. Check vital signs + brain imaging
2. Call the cerebrovascular unit
3. 1 + 2 
4. Wait... is the eye ok? I think that is not ophthalmology
5. Scream

CLINICAL CASE II

PHYSICAL EXAMINATION

Vital signs: BP 145/86 mmHg; HR 75 beats/min regular; Respiratory rate 18 breaths/min; Oxygen saturation 99%

COMPLEMENTARY TESTS: BRAIN CT + ANGIOGRAPHY



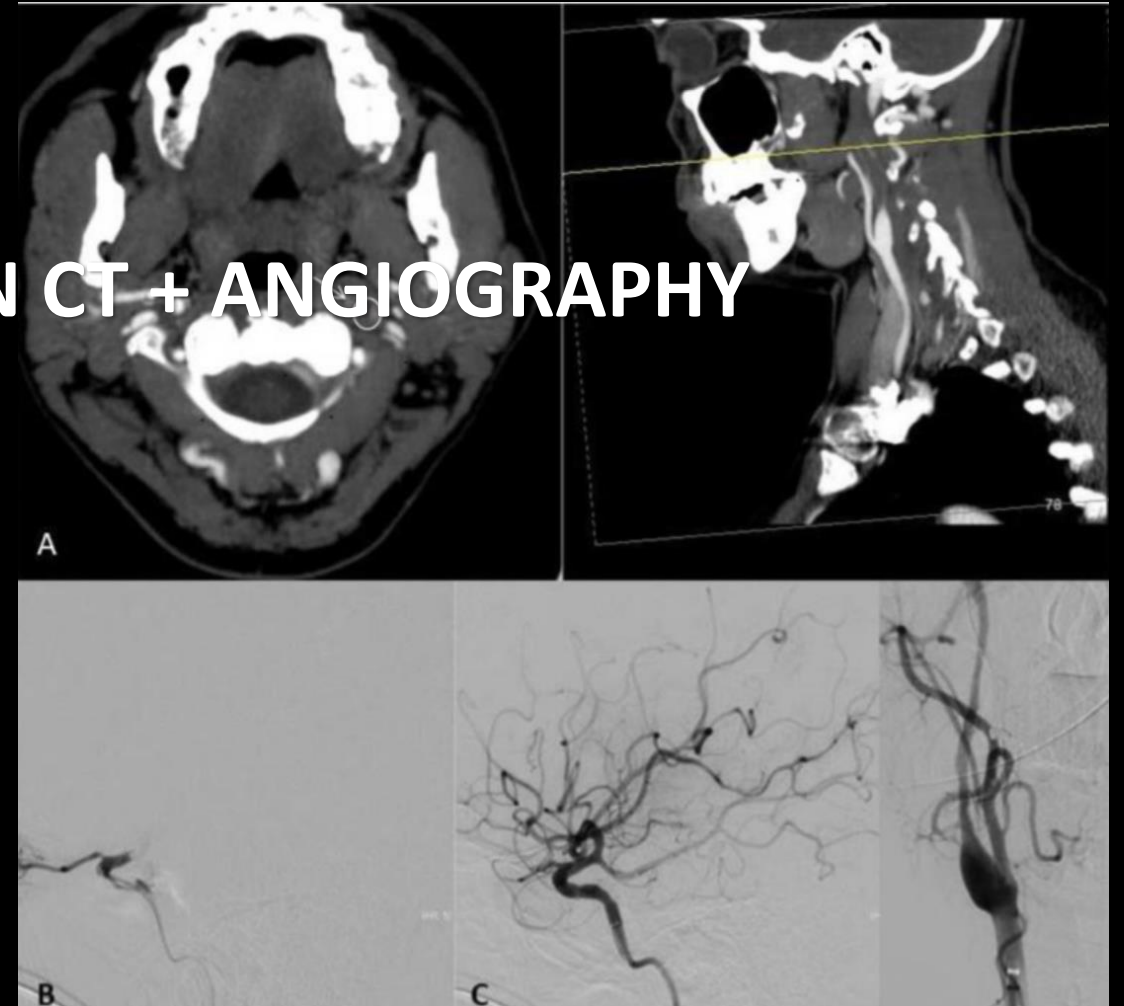
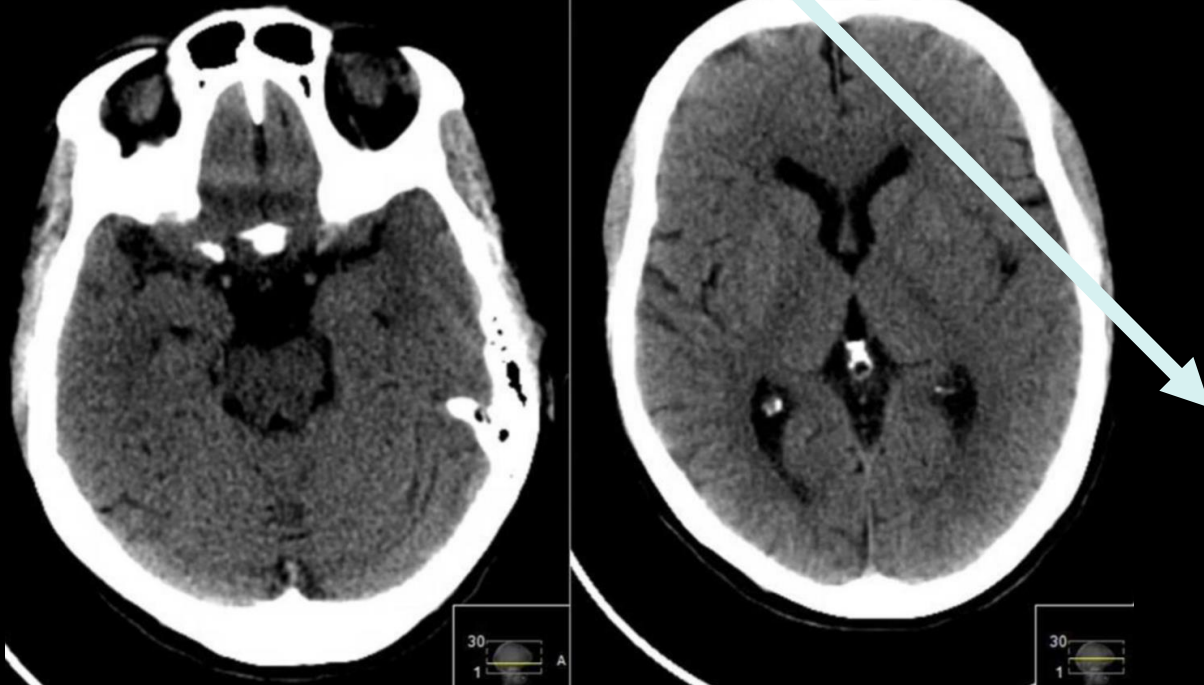
CLINICAL CASE II



Aspiration **thrombectomy** + **tPA**

Admission to the cerebrovascular unit

COMPLEMENTARY TESTS: BRAIN CT + ANGIOGRAPHY



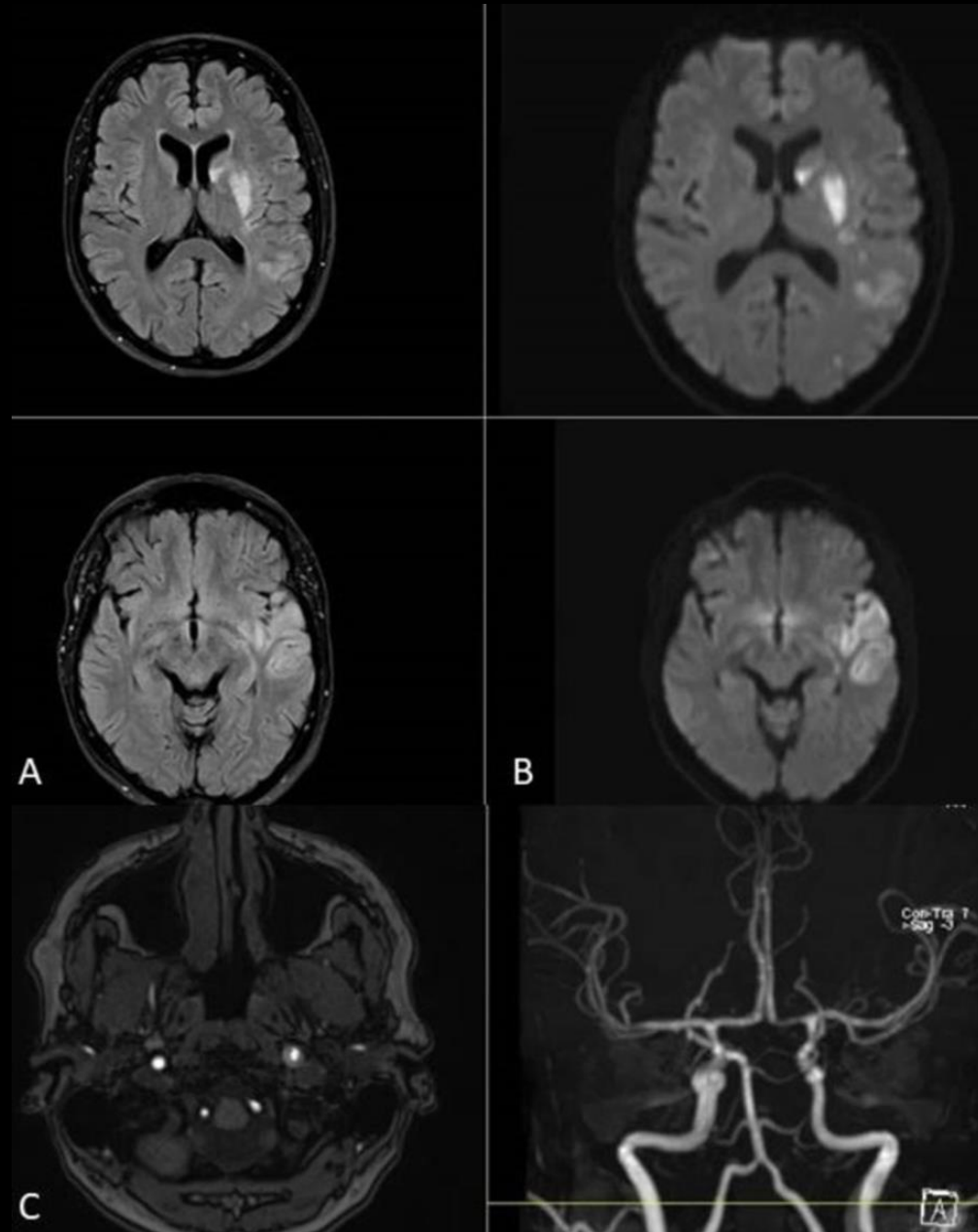
CLINICAL CASE II

COMPLEMENTARY TESTS: BRAIN MRI 48H + ANGIO

- Arterial dissection extending from the post-bulbar segment of the LICA to the skull base;
- Homogeneous reduction of LICA caliber without significant focal stenosis.

TRANSCRANIAL DOPPLER

- Permeable MCA;
- Haemodynamic changes compatible with type 4 reperfusion.



CLINICAL CASE II

QUESTION 5

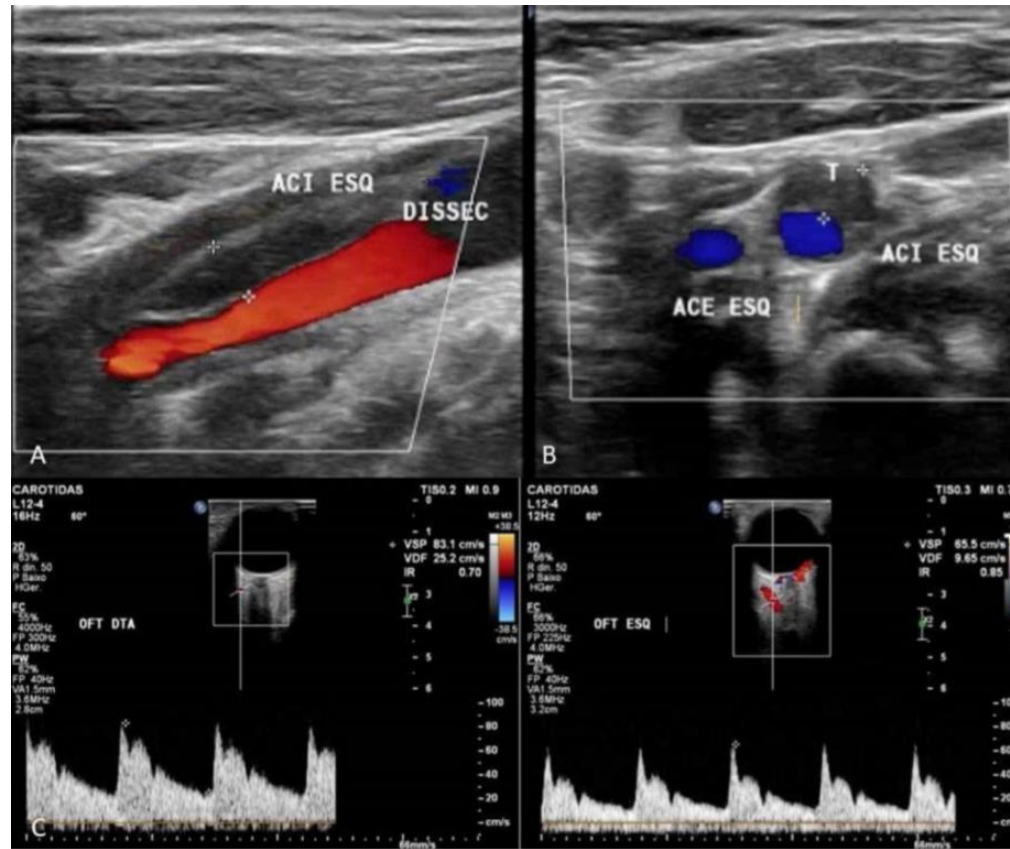


Which complementary test is missing?

1. Blood tests
2. Carotid artery doppler ultrasonography
3. 1 + 2 
4. Ask the internal medicine/neurologist specialist
5. None

CLINICAL CASE II

COMPLEMENTARY TESTS: CAROTID ARTERY DOPPLER



- Moderate stenosis (50%– 60%) of proximal LICA;
- Severe stenosis (70%–80%) in the distal LICA.

BLOOD TESTS

- No alterations.

CLINICAL CASE II

FOLLOW-UP



48 AFTER THERAPEUTICS

Decreased VA on her left eye

OD		OS
?	VA	?
Normal	PUPILS	Normal
Normal	MOTILITY	Normal
Normal	SLIT LAMP	Normal
Normal	IOP	Normal
Normal	FUNDOSCOPY	Retinal oedema Cherry-red spot

- Left ophthalmic artery permeable;
- Normal flow velocity, amplitude and direction;
- **Increased resistance index.**



- Normal resistance index
3 days later

CRAO

CLINICAL CASE II

FOLLOW-UP



6 DAYS AFTER ADMISSION

Improvement on serial ultrasound studies;

Improved neurological function;

Discharge: statin + antiaggregant + speech and language therapy + neuro-ophthalmology appointment.

2 MONTHS: Neuro-ophthalmology

OD		OS
20/20	VA	20/25
Normal	PUPILS	Mild RAPD
Normal	MOTILITY	Normal
Normal	SLIT LAMP	Normal
Normal	IOP	Normal
Normal	FUNDOSCOPY	Pallor of the optic disc

CLINICAL CASE II

QUESTION 6

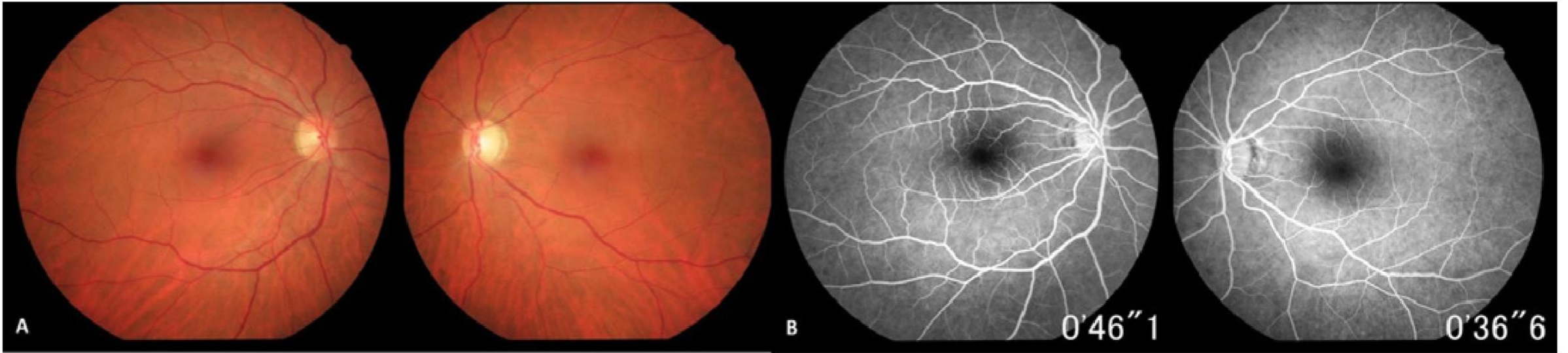


How to proceed?

1. Fundus fluorescein angiography
2. Optical coherence tomography
3. Automated static perimetry
4. 1 + 2 + 3 
5. 2 + 3

CLINICAL CASE II

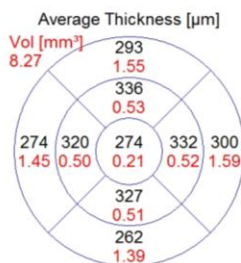
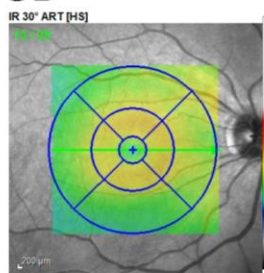
COMPLEMENTARY TESTS: FLUORESCEIN ANGIOGRAPHY



CLINICAL CASE II

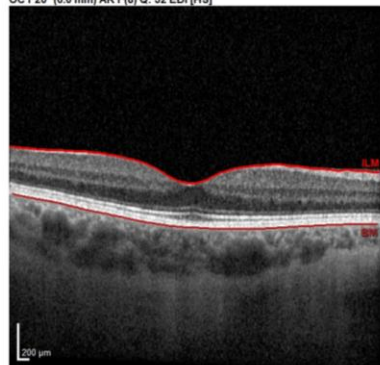
COMPLEMENTARY TESTS: OCT

OD

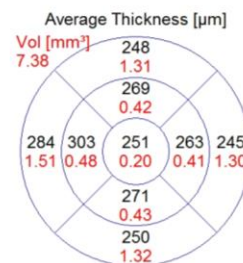
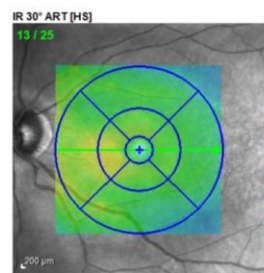


Center: 236 μm
Central Min: 235 μm
Central Max: 320 μm
Circle Diameters: 1, 3, 6 mm ETDRS

OCT 20° (6.0 mm) ART (8) Q: 32 EDI [HS]

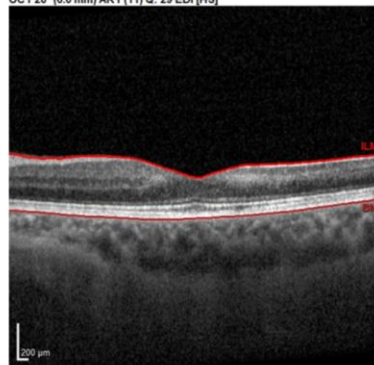


OS

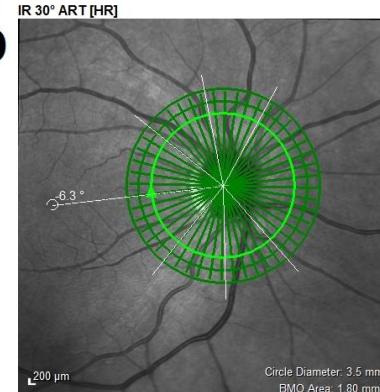


Center: 217 μm
Central Min: 216 μm
Central Max: 282 μm
Circle Diameters: 1, 3, 6 mm ETDRS

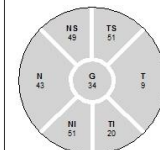
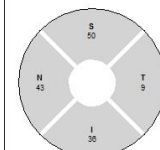
OCT 20° (6.0 mm) ART (11) Q: 29 EDI [HS]



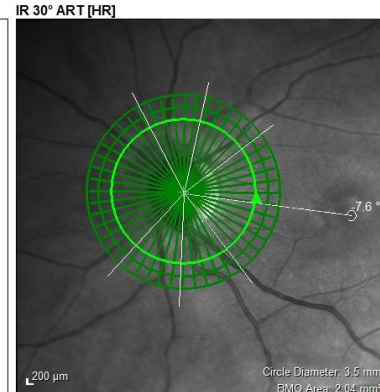
OD



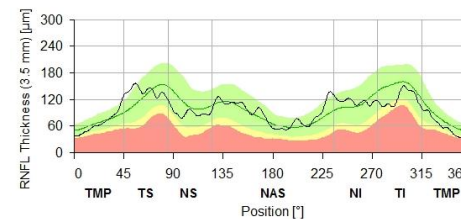
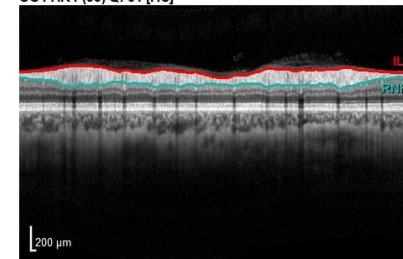
Asymmetry
OD - OS



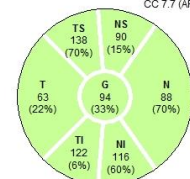
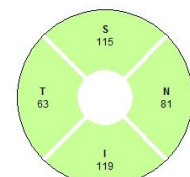
OS



OCT ART (99) Q: 31 [HS]



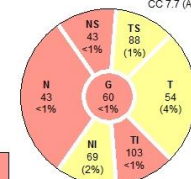
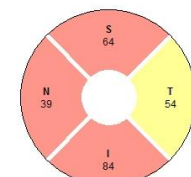
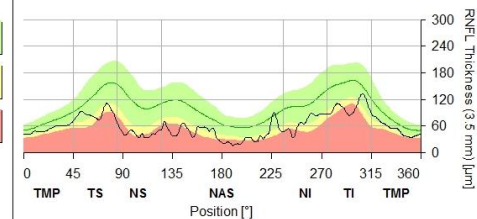
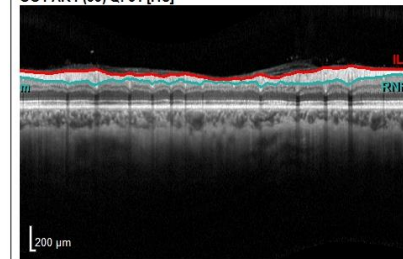
Within Normal Limits
(p>0.05)
Borderline (p<0.05)
Outside Normal Limits
(p<0.01)



Classification OD

Within Normal Limits

OCT ART (99) Q: 31 [HS]



Classification OS

Outside Normal Limits

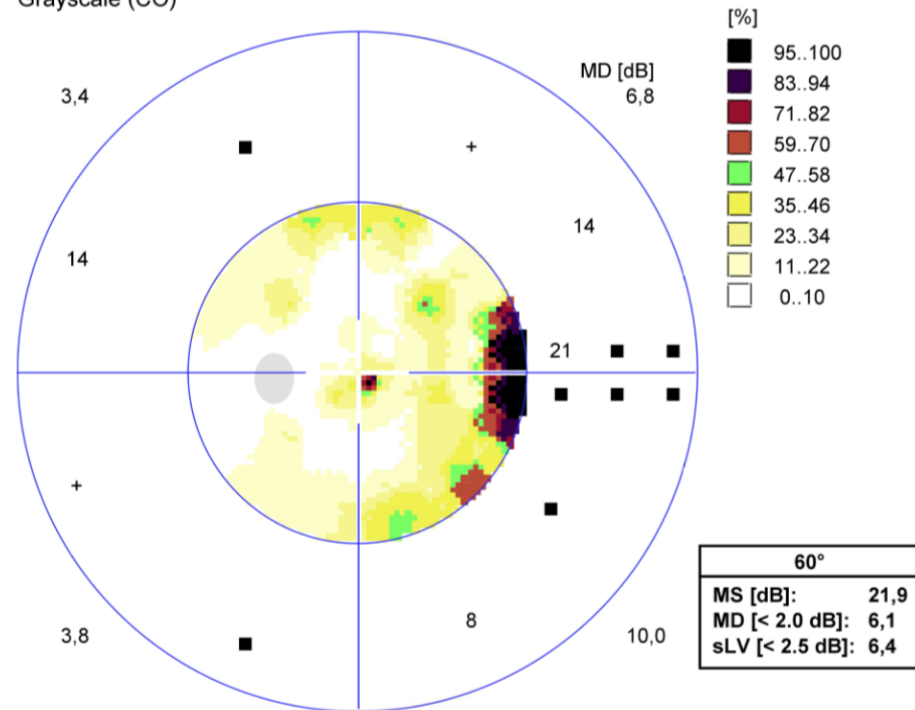
CLINICAL CASE II

COMPLEMENTARY TESTS: VISUAL FIELD



Left eye (OS) / 27-06-2018 / 16:24:43

Grayscale (CO)

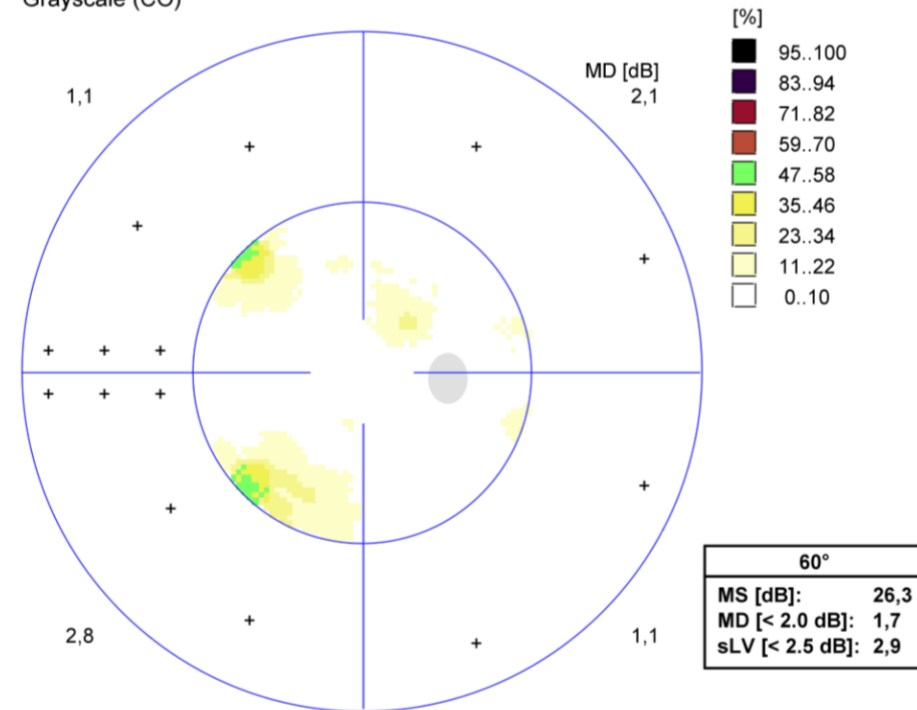


Programs: G Standard White/White / Dynamic Questions / repetitions: 223 / 0
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 Catch trials: 0/11 (0%) +, 0/12 (0%) - RF: 0,0
 Refraction S/C/A: -0.75/-0.25/80 VA [dec]:
 Pupil [mm]: IOP [mmHg]:
 NV: T11 V2.1

Comment:

Right eye (OD) / 27-06-2018 / 16:16:05

Grayscale (CO)



Programs: G Standard White/White / Dynamic Questions / repetitions: 165 / 0
 Parameters: 4 / 1000 asb III 100 ms Duration: 05:10
 Catch trials: 0/8 (0%) +, 0/9 (0%) - RF: 0,0
 Refraction S/C/A: -0.75/-0.25/120 VA [dec]:
 Pupil [mm]: IOP [mmHg]:
 NV: T11 V2.1

Comment:

CLINICAL CASE II

KEY POINTS



OCULAR MANIFESTATIONS OF ICAD

Visual symptoms



- **Transient monocular visual loss**
- Ischemic optic neuropathy
- Central/branch retinal artery occlusion
- Ophthalmic artery occlusion

Oculosympathetic palsy
Horner syndrome

Ocular motor nerve palsy

6-38%

21% + ipsilateral facial, head, or cervical pain

- scintillations, flashing lights, bright spots and
scintillating scotoma > related to postural changes

9,5% nonreversible cerebral infarctions (5.7d after the 1st
episode)

CLINICAL CASE II

KEY POINTS



OCULAR MANIFESTATIONS OF ICAD

Visual symptoms



- Transient monocular visual loss
- **Ischemic optic neuropathy**
- Central/branch retinal artery occlusion
- Ophthalmic artery occlusion

Oculosympathetic palsy
Horner syndrome

Ocular motor nerve palsy

ICAD **is rarely** a reason for ION;
2,74-4% of cases, ICAD occurs with ION;
Clinical features of ION caused by ICAD $\neq$ from those of nonarterial anterior ION:

CLINICAL CASE II

KEY POINTS



OCULAR MANIFESTATIONS OF ICAD

Visual symptoms

Oculosympathetic palsy
Horner syndrome

Ocular motor nerve palsy

- 1) Younger age in ICAD (44y, range 33-51y);
- 2) Severe ipsilateral orbital pain;
- 3) Previous recurrent episodes of transient monocular blindness lasting 3-8d before permanent visual loss;
- 4) Horner syndrome;
- 5) Not associated with hypertension, diabetes, or hyperlipidemia.

ICAD **is rarely** a reason for ION;

2,74-4% of cases, ICAD occurs with ION;

Clinical features of ION caused by ICAD ≠ from those of nonarterial anterior ION:



CLINICAL CASE II

KEY POINTS



OCULAR MANIFESTATIONS OF ICAD

Visual symptoms



- Transient monocular visual loss
- Ischemic optic neuropathy
- **Central/branch retinal artery occlusion**
- Ophthalmic artery occlusion

Oculosympathetic palsy
Horner syndrome

Ocular motor nerve palsy

CRAO w/ ICAD is very rare; even more as primary manifestation: 2 cases reported in the literature

MECHANISM:

>> **Reduced perfusion in the ophthalmic artery w/ reversal of flow**

<< Retinal embolic material (2 cases reported)

All patients with CRAO should be questioned about other ICAD associated symptoms.

CLINICAL CASE III

ID & PAST HISTORY



- 67-year-old
- Past medical history:
 - Several urinary infections (w/ haematuria)
 - Dyslipidemia
 - Major depressive syndrome
 - Allergic rhinosinusitis
 - Safenectomy
- Medication: Anafranil 25; Sinvastatine; Aeries SOS. Nitroforantuine 2 weeks previously.

CLINICAL CASE III

HISTORY OF PRESENT ILLNESS



4-days



Sudden onset of blurred vision of the nasal hemifield of left eye + dizziness.



20-days before

Sudden cervical pain w/
dysesthesia of the left scalp.



18-days before

Fever (max. 38.4°C); urinary tract
infection symptoms and cervical
pain; VS 120; treated with
furantadine and NSAID for 5 days.

OCULAR EXAMINATION

OD		OS
10/10	BCVA	6/10
Normal	PUPILS	RAPD
Normal	MOTILITY	Normal
Phacosclerosis	SLIT LAMP	Phacosclerosis
Normal	IOP	Normal
Normal	FUNDOSCOPY	Optic disc oedema; peripapillary hemorrhage

CLINICAL CASE III

CASE SUMMARY

- Women
- 67-year-old
- Dyslipidemia
- Moderate unilateral vision loss (6/10)
- Optic disc edema + peripapillary hemorrhage
- VS 120ml/h (in a UTI context)

+ Dysesthesia of the left scalp; episodic fever?



CLINICAL CASE III

QUESTION 7



How to proceed now? Choose 1 answer or more.

1. Blood tests 
2. Brain CT 
3. Send to the ER 
4. Temporal artery biopsy
5. Carotid artery doppler



CLINICAL CASE III

PHYSICAL EXAMINATION

Vital signs: BP 126/56 mmHg; HR 89 beats/min regular; Oxygen saturation 98%
Neurologic examination: N

COMPLEMENTARY TESTS: BLOOD TESTS

Normocytic normochromic anemia

WBC N

Platelets count 459×10^9

PCR 56mg/L

VS 103mm/h

Remaining analytical evaluation N

Urine II:

Leukocyturia: 60/uL

Haematuria: 276/uL

BRAIN CT Left frontal subcortical hypodensity in relation to an imprecise vascular lesion.

CLINICAL CASE III

QUESTION 8



What's the likely diagnosis?

1. Arteritic anterior ischemic optic neuropathy 
2. Nonarteritic ischemic optic neuropathy
3. Optic neuritis
4. Urinary tract infection (UTI)
5. Carotid artery dissection

CLINICAL CASE III

QUESTION 9



How to proceed immediately? Choose 1 answer or more.

1. Orbit & brain Angio-MRI 
2. Temporal artery doppler or biopsy
3. Lumbar puncture (LP)
4. IV methylprednisolone (1000mg/day) 
5. OCT + VF 

CLINICAL CASE III

CAROTID & TEMPORAL ARTERY DOPPLER



TEMPORAL ARTERY

- **Permeable** superficial temporal arteries;
- Symmetrical flow velocities of normal amplitude and directions;
- Increased resistance indices with no hemodynamic significance;
- **No evidence of "halo"** suggestive of inflammatory process.

VERTEBRAL & CAROTID ARTERY

- Mild stenosis (<50%) of V2 segment of the vertebral artery bilaterally w/ fibro-calcic atheroma plaque;
- Atheroma plaque in the middle portion of primitive carotid bilaterally without hemodynamic repercussion.



Admission to Neurology department.

CLINICAL CASE III

FOLLOW-UP



TREATMENT

Prescribed:

IV methylprednisolone 1g/day
3 days



Prednisone per os
1 mg/kg/day

BLOOD TESTS

w/ 2 pulses of methylprednisolone:

WBC 15 000 (+)
Platelets count 515×10^9 (+)
PCR 21mg/L (-)
VS 103mm/h (=)

Serologies for infectious and immunologic diseases **N**

Missed 1 pulse o methyl

CLINICAL CASE III

FOLLOW-UP



2 DAYS AFTER

OD

8/10 (-)

Normal

Normal

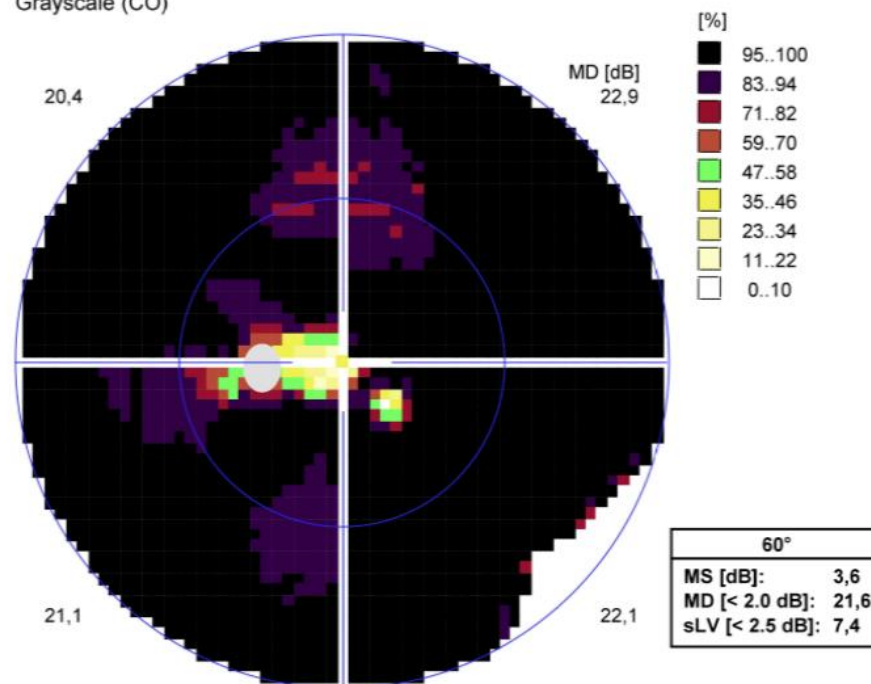
Phacosclero

Normal

Optic disc oede

Left eye (OS) / 20-12-2018 / 11:09:31

Grayscale (CO)



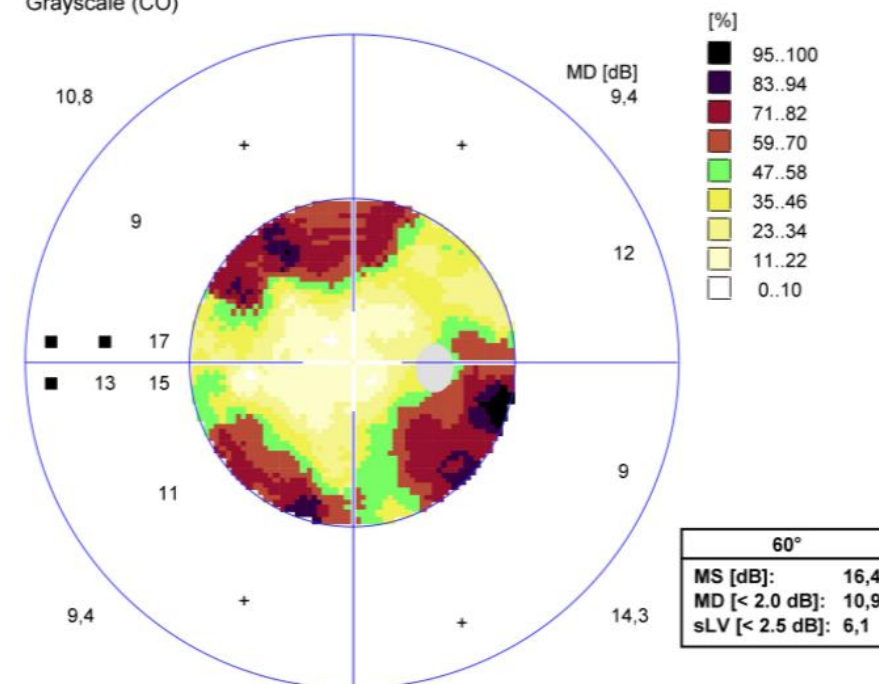
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Parameters: 4 / 1000 asb III 100 ms
Catch trials: 3/13 (23%) +, 2/6 (33%) -
Refraction S/C/A: 1.5/-0.75/90
Pupil [mm]: 6.7
NV: T11 V2.1

Questions / repetitions: 184 / 0
Duration: 06:53
RF: 26,3
VA [dec]:
IOP [mmHg]:

Comment:

Right eye (OD) / 20-12-2018 / 10:58:19

Grayscale (CO)



Programs: G Standard White/White / Dynamic
Parameters: 4 / 1000 asb III 100 ms
Catch trials: 0/11 (0%) +, 1/9 (11%) -
Refraction S/C/A: 1.75/-1.25/120
Pupil [mm]: 5.05
NV: T11 V2.1

Questions / repetitions: 202 / 0
Duration: 06:44
RF: 5,0
VA [dec]:
IOP [mmHg]:

Comment:

w/ 2 pulses of methylprednisolone

CLINICAL CASE III

QUESTION 3 (again)



How to proceed? Choose 1 answer or more.

1. Orbit & brain Angio-MRI 
2. Temporal artery doppler or biopsy
3. Lumbar puncture (LP) 
4. IV methylprednisolone (1000mg/day)
5. OCT + VF

CLINICAL CASE III

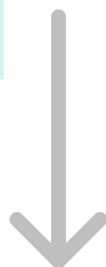
FOLLOW-UP



Completed methyl 3 days cycle

LP & BLOOD & Angio-MRI

- Opening pressure of 8-10 cmH₂O
- CSF analysis: N



WBC 10 000
Platelets count 412×10^9
PCR 3.3mg/L
VS 68mm/h

- Angio-MRI : N

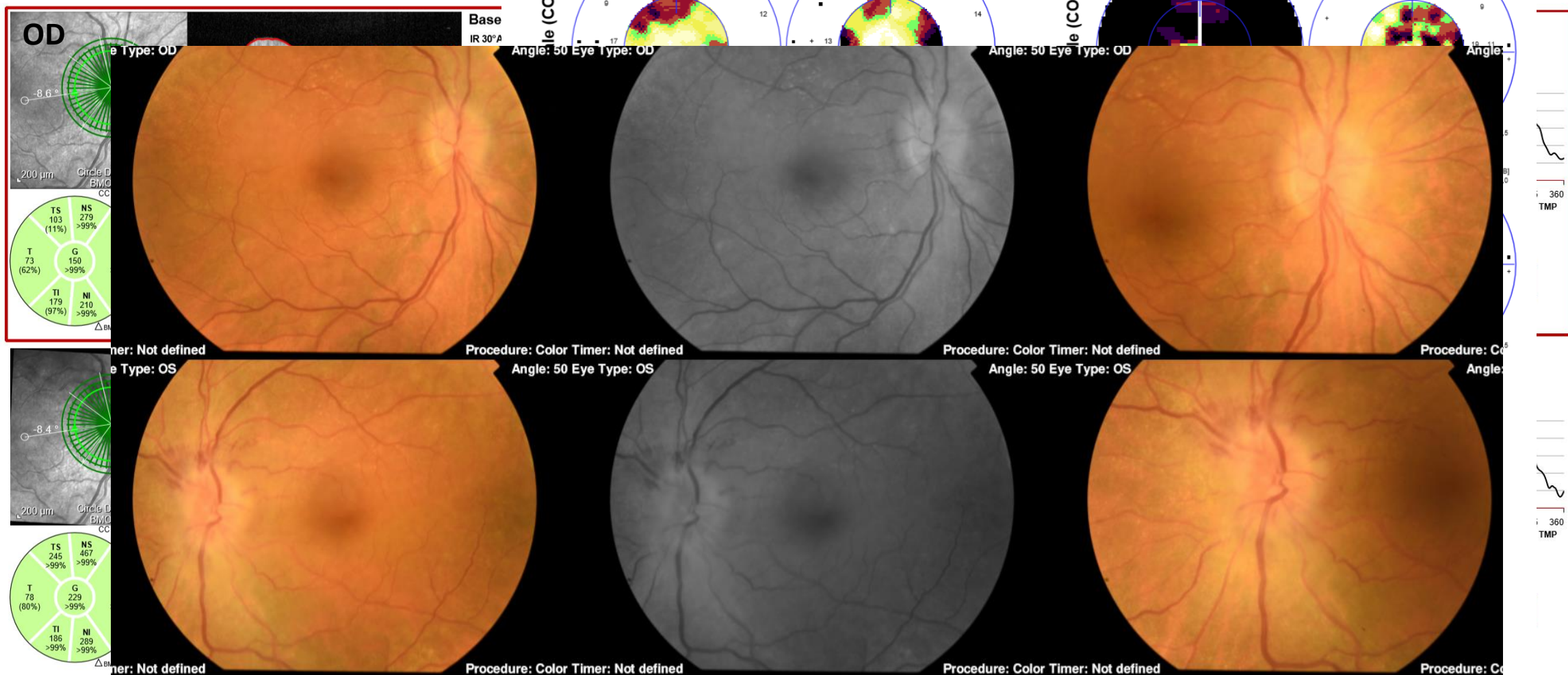
Prednisone per os
1 mg/kg/day

8 DAYS AFTER 1st OBS: Ocular examination

OD		OS
8/10 (=)	BCVA	4/10 (-)
Normal	PUPILS	RAPD
Normal	MOTILITY	Normal
Phacosclerosis	SLIT LAMP	Phacosclerosis
Normal	IOP	Normal
Optic disc oedema	FUNDOSCOPY	Optic disc oedema; peripapillary hemorrhages

/ 27-12-18 / 10:14

MD [aB]
10.0



CLINICAL CASE III

FOLLOW-UP



10 DAYS AFTER 1st OBS

BLOOD TESTS



PCR 1.8mg/L (--)
VS 51ml/h (--)



Discharge
MTX per os 20mg/week;
Pdn 50mg/day

CLINICAL CASE III

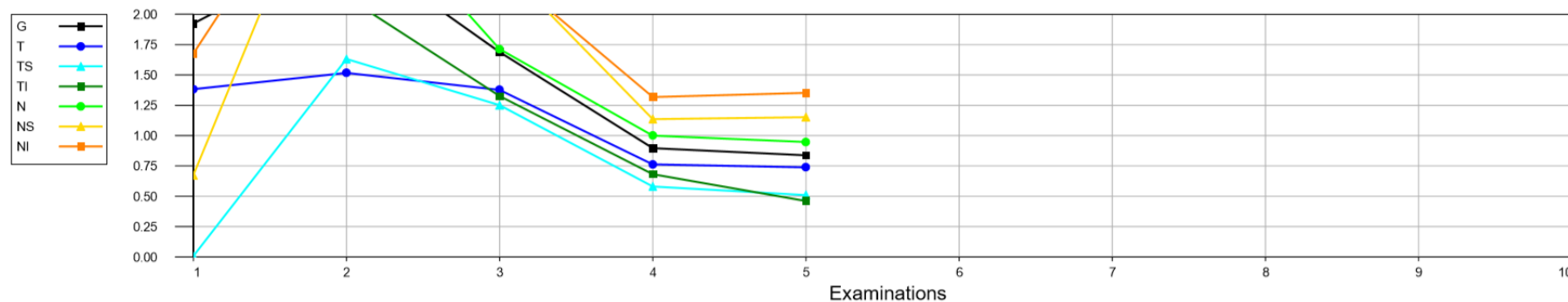
FOLLOW-UP

OS



OCT

Normalized RNFL Thickness



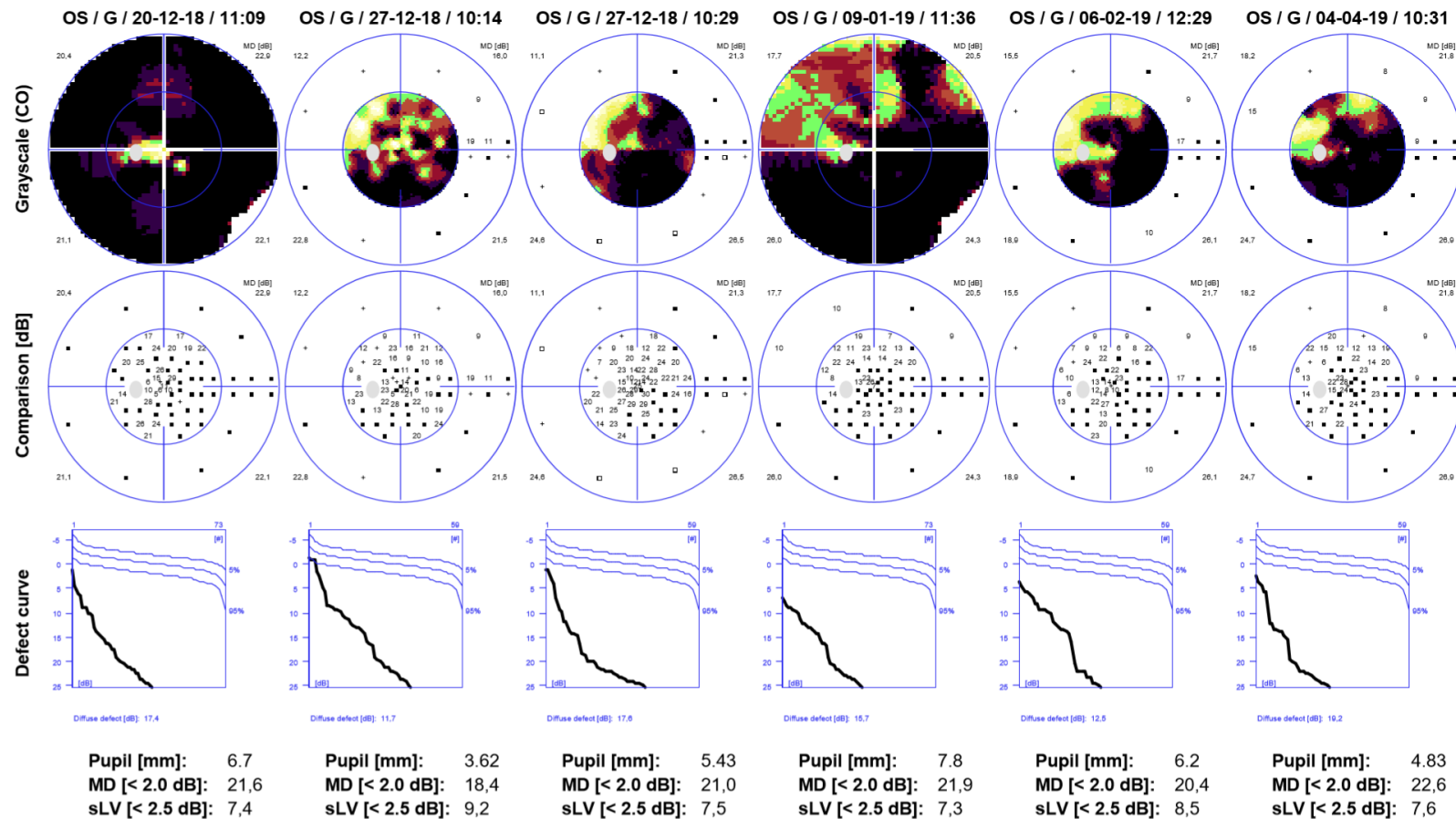
Exam Date	20/dez/2018	27/dez/2018	09/jan/2019	06/fev/2019	04/abr/2019
RNFL Thickness (3.5 mm)					
Difference to Selected Reference					

CLINICAL CASE III

FOLLOW-UP



VISUAL FIELD



CLINICAL CASE III

FOLLOW-UP



Last Visit: 4 MONTHS AFTER ONSET

OD		OS
8/10 (=)	BCVA	8/10 (+)
Normal	PUPILS	Normal
Normal	MOTILITY	Normal
Phacosclerosis	SLIT LAMP	Phacosclerosis
20	IOP	18
Optic disc atrophy OD>OE	FUNDOSCOPY	Optic disc atrophy

CLINICAL CASE III

DISCUSSION



- Arteritic VS nonarteritic ischemic optic neuropathy:

Feature	Arteritic AION	Nonarteritic AION
Age (mean years)	70 🍏	60
Sex ratio	Female > male 🍏	Male = female
Associated symptoms	Headache, scalp tenderness, jaw claudication	Mild pain occasionally noted
Visual acuity	Up to 76% < 20/200 (6/60)	Up to 61% > 20/200 (6/60) 🍏
Disc	Pale > hyperemic edema Cup normal	Hyperemic > pale edema Cup small
Mean erythrocyte sedimentation rate (mm/hour)	70 🍏	20–40
Fluorescein angiogram	Disc and choroid filling delay	Disc filling delay
Natural history	Improvement rare Fellow eye in up to 95% 🍏	Improvement in up to 43% Fellow eye in < 30%
Treatment	Corticosteroids	None proved

Live Educational Event (LEE): Getting ready to tackle eye emergencies!

Section 1: Neuro-Ophthalmology

What not to miss in neuro-ophthalmology - part 2

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