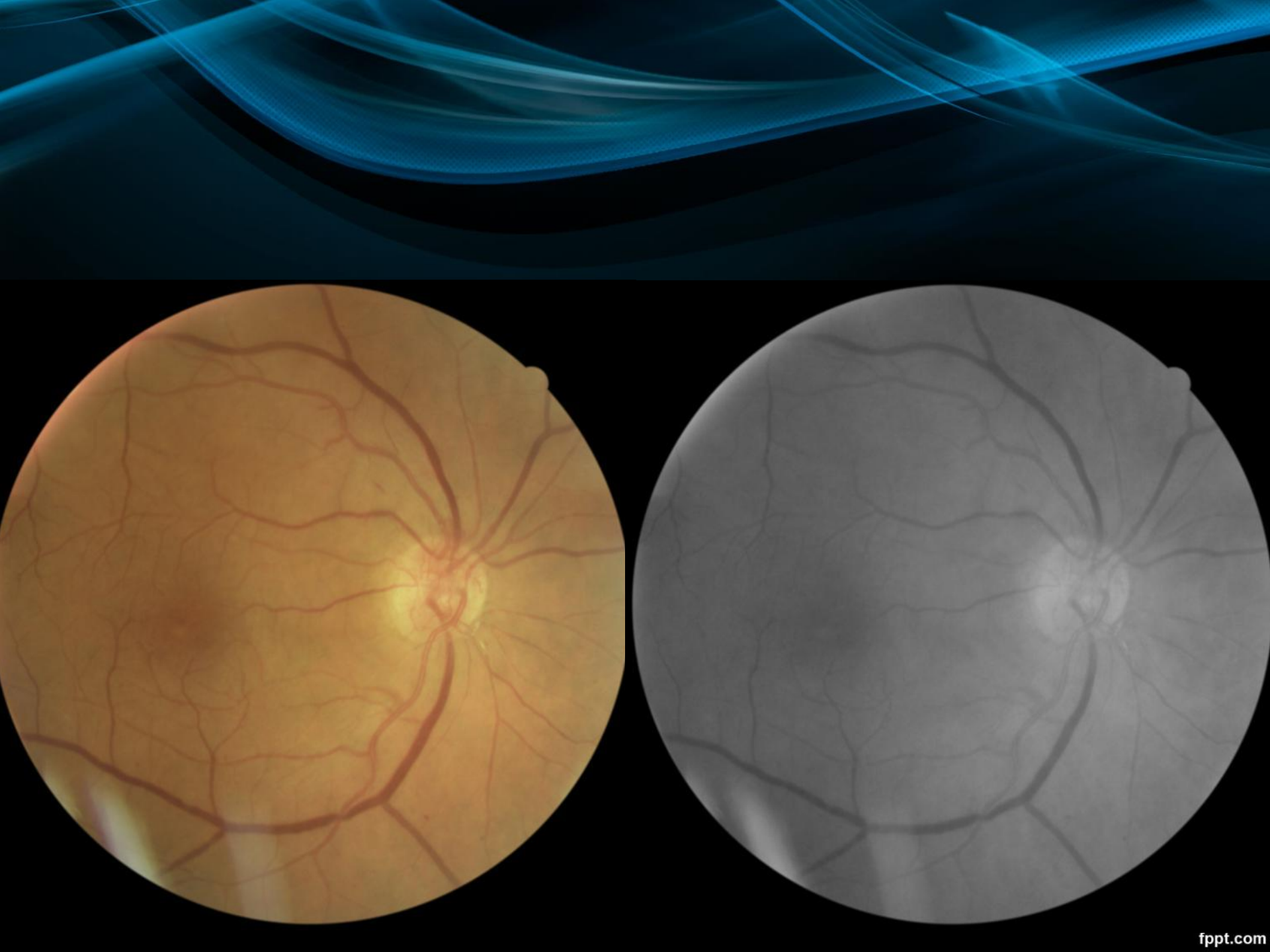
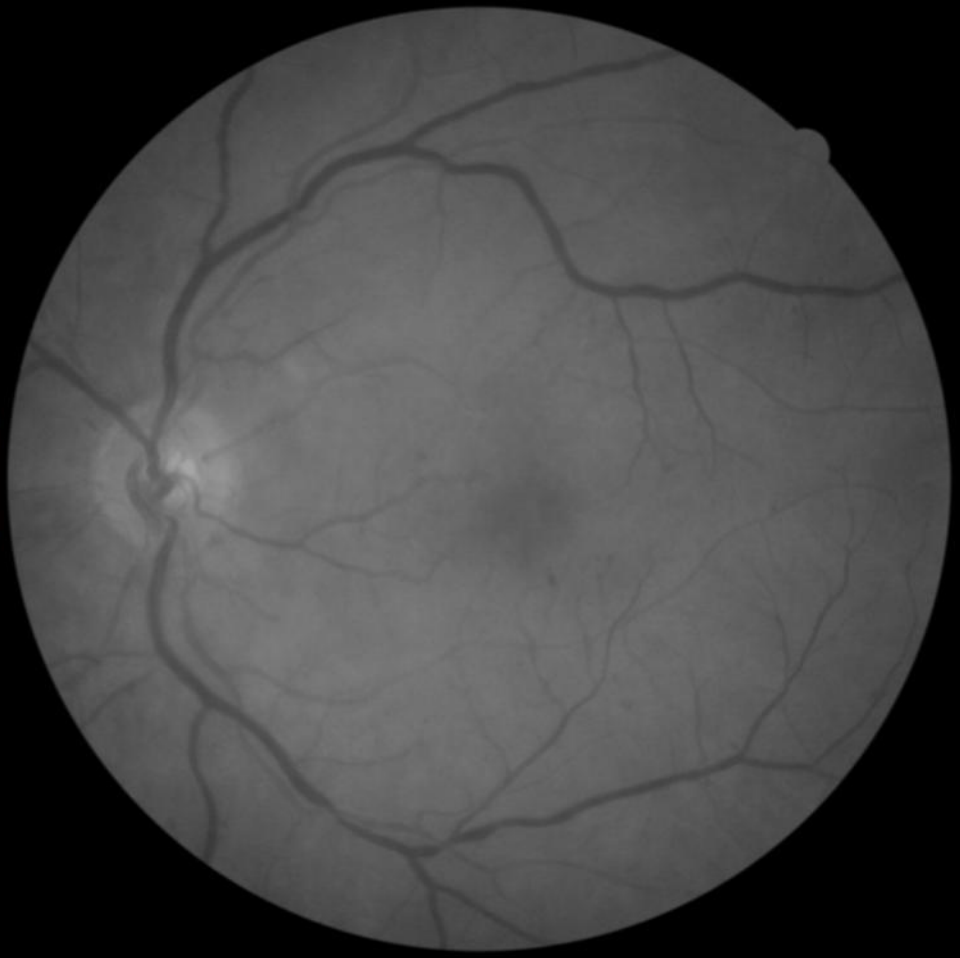
Things Aren’t Always Entirely What They Seem

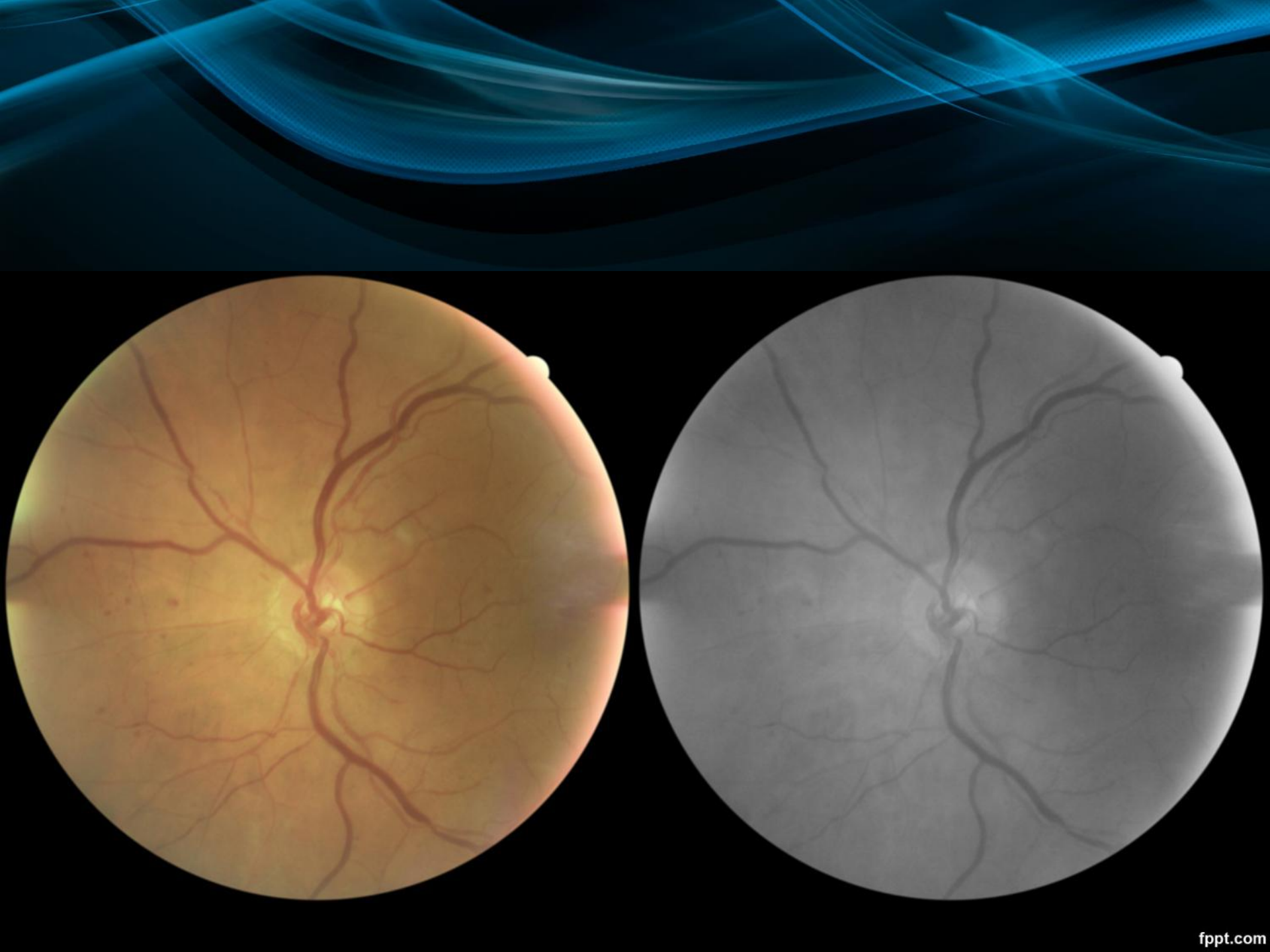
Kate Powell, Bristol Eye Hospital

CASE 1

- 62 year old female
- Type 2 diabetes diagnosed 10/11/2015
- HbA1c at diagnosis 144mmol/mol
- Total Cholesterol 5 mmol/mol
- Referred for DESP 24/11/2015
- First DESP RDS appt 07/01/2016
  - VA R Unaided 6/18
    L Unaided 6/18







Management by DESP

- Referred urgently from DESP to Bristol Eye Hospital
- HES appt 20/1/2016 patient did not attend
- Attended HES appt 27/1/2016

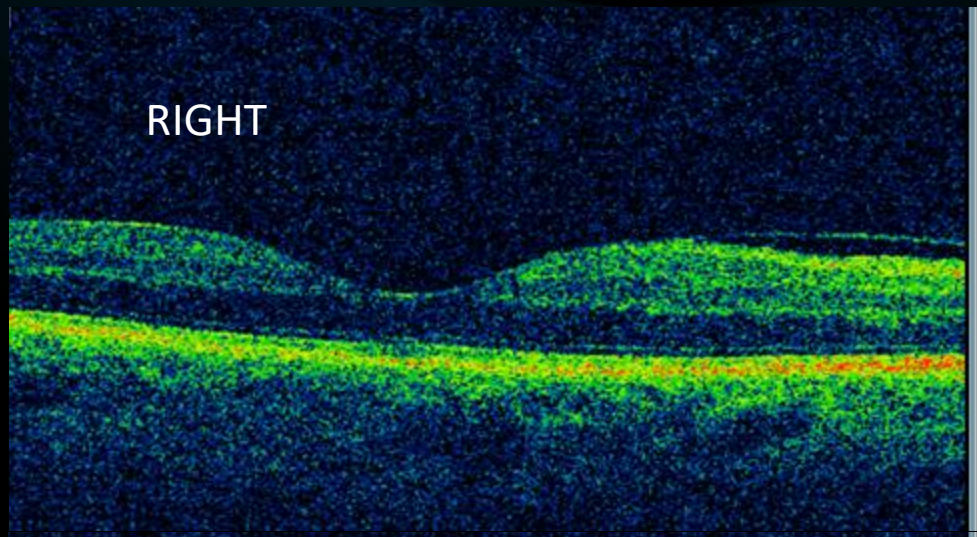
- Time from first screening images capture to first offered HES appointment 13 days

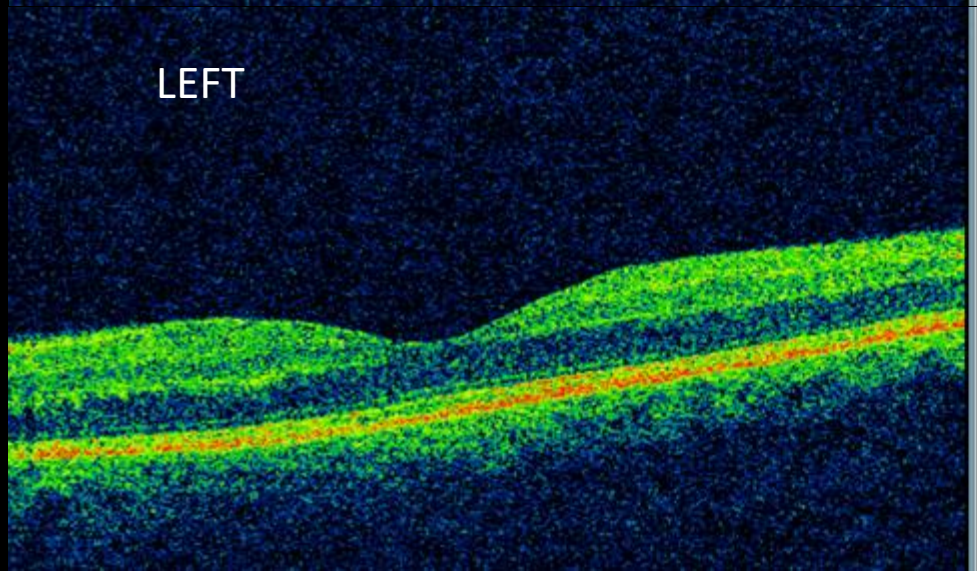
Outpatient appt 27/1/2016

- OH: Asymptomatic
- POH: Spex only. Low myope
- FOH: Nil
- GH: Type 2 DM diagnosed ~ 10/52 ago. Tablet controlled only at present.
  - » Hypertensive
  - » No previous Heart Attack/ Stroke
  - » No Headaches
  - » Non smoker
  - » Being investigated under neurology as keeps collapsing and getting tremors left side

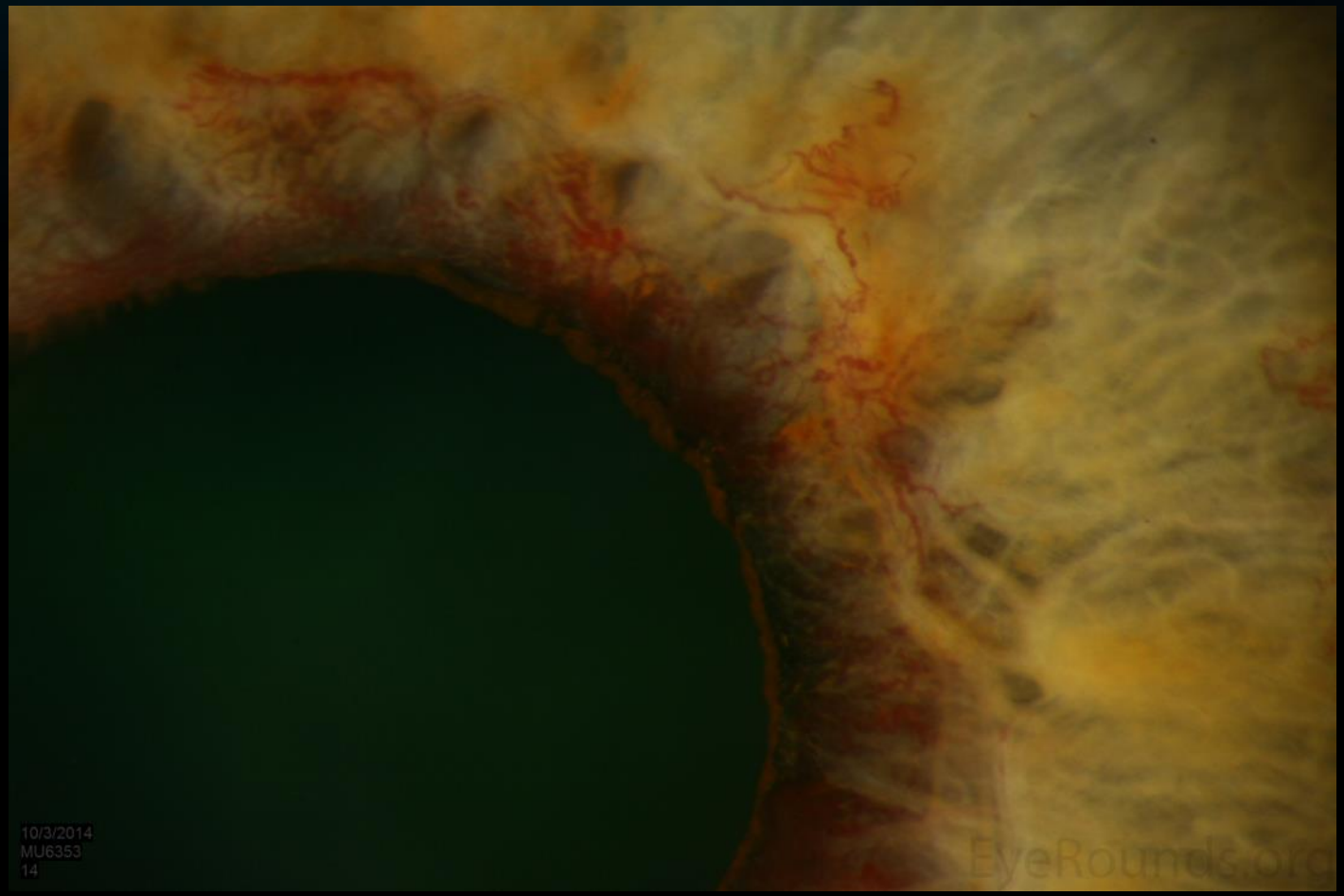
Medication: Metformin, Atorvastatin, Aripiprazole, Mitrazapine

VA	R 6/7.5	L 6/9
IOP	R 14 mmHg	L 12 mmHg





Anterior Segment Right

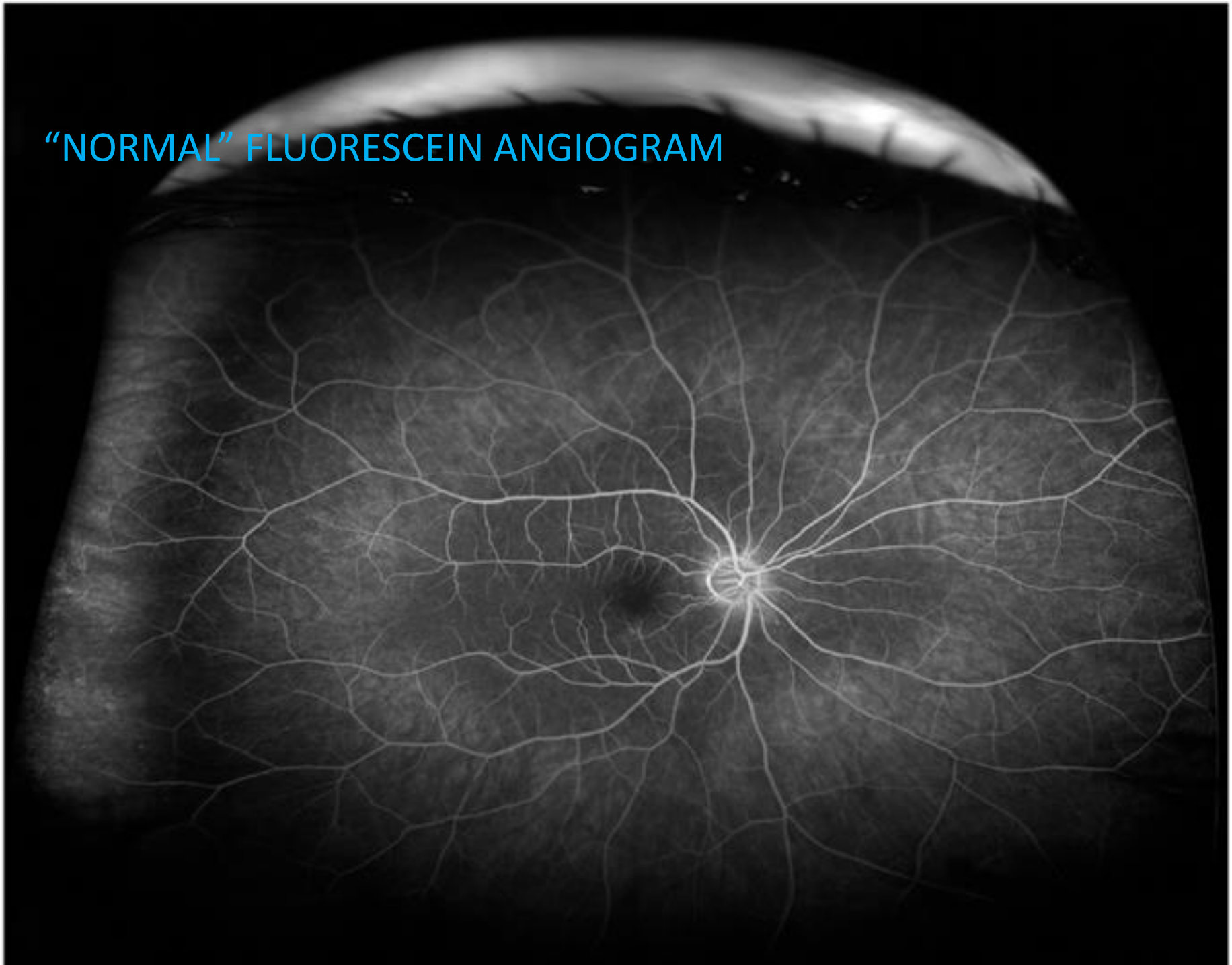


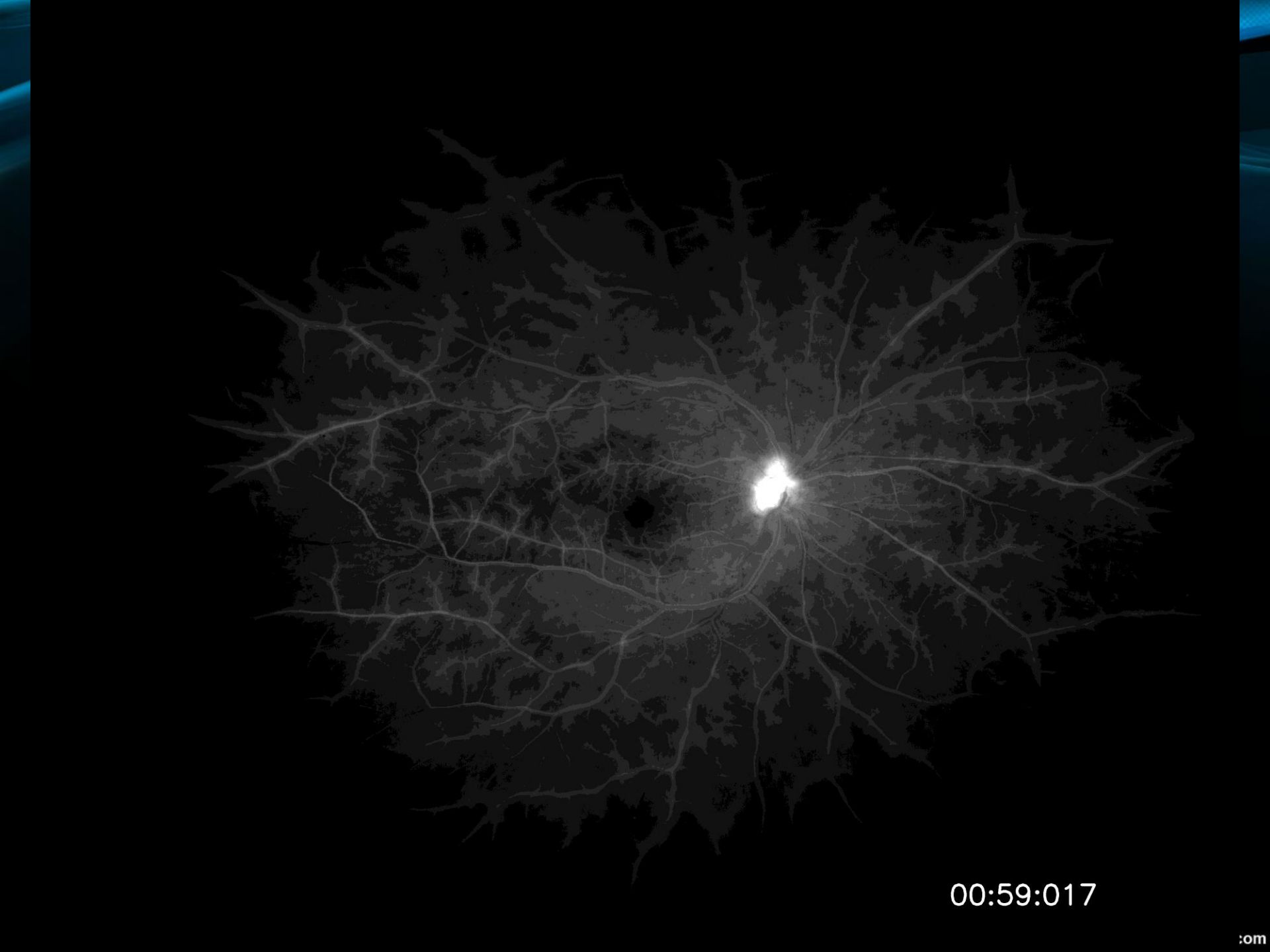
Outpatient appt 27/1/2016

Wide Field Fluorescein Angiography requested

BP:	86/66 mmHg @10.25am	Right arm
	151/91 mmHg @10.45 am	Left arm
	109/81 mmHg @10.47 am	Right arm

“NORMAL” FLUORESCEIN ANGIOGRAM

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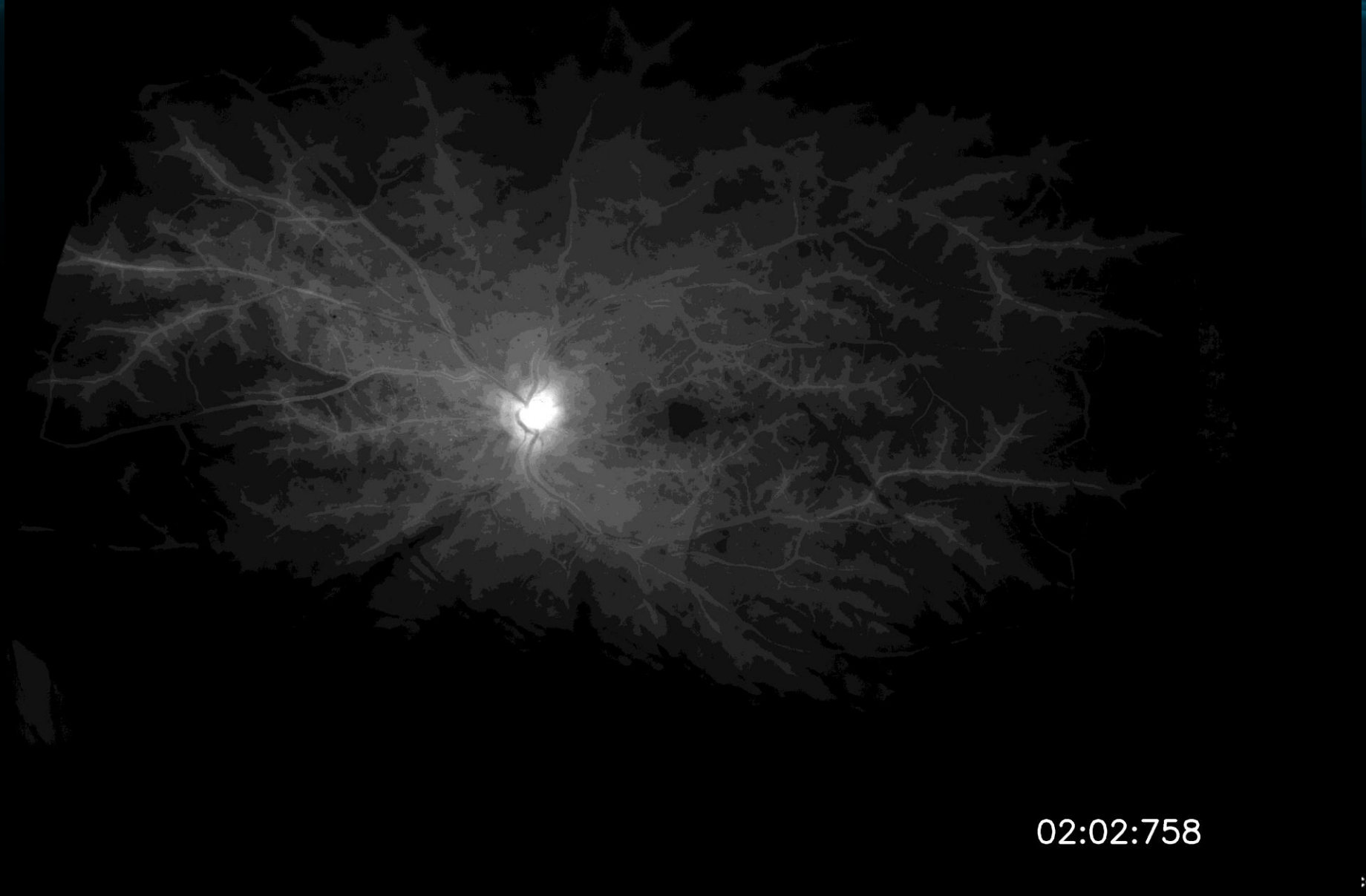
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Summary of findings

- Recently Diagnosed with Type 2 Diabetes
- Profoundly ischaemic eyes
- NVD and NVI right > left
- BP marked asymmetry between the two arms (R<<L)
- Neurological symptoms under investigation

Is this just severe Diabetic Retinopathy or is there something else going on?

Plan re ocular issues

- PLAN:
  - Listed for Urgent PRP laser
  - Attended for bilateral PRP on 5/2/2016
  - Required further bilateral PRP August 2016 but has required no further ocular treatment since

Significance of Asymmetric Brachial Blood Pressure

- Research shows that asymmetry of Brachial BP above 15mmHg difference is:
  - Associated with the presence of cerebrovascular disease
  - Associated with all cause and cardiovascular mortality
  - High specificity (95%) but low sensitivity (15%)
- Approx 4 % of the UK population have BP asymmetry of >20 mmHg between the two arms
- Nice Guidelines advise measurement of BP in both arms

1.Association of a difference in systolic blood pressure between arms with vascular disease and mortality: a systematic review and meta-analysis
Clark et al The Lancet Volume 379, Issue 9819, 10-16 March 2012, Pages 905-914
2. NICE Guideline CG127 Diagnosis and Management of Hypertension in Adults

Plan re systemic health concerns

- PLAN:
  - Referred for Carotid Dopplers
  - Copy info to GP and Neurology
  - Phoned GP re BP asymmetry

Carotid Doppler

Carotid Doppler Results

Symptoms - RIGHT carotid territory		Symptoms - LEFT carotid territory
	CVA	
	TIA	
	TMB	
	Other visual	

Right side	Left side
The brachiocephalic artery was patent.	
The subclavian artery was patent and Doppler flow patterns were normal.	The subclavian artery was patent and Doppler flow patterns were normal.
The vertebral artery was patent and Doppler flow patterns were normal.	The vertebral artery was patent and Doppler flow patterns were normal.
Nothing abnormal was seen in the common carotid and Doppler flow patterns were normal (78/15 cm/s).	Nothing abnormal was seen in the common carotid and Doppler flow patterns were normal (90/23cm/s).
The carotid bifurcation was moderately atheromatous.	The carotid bifurcation was mildly atheromatous.
Large irregular mixed echogenic plaque at the origin of the internal carotid and Doppler flow patterns were enhanced (457/18 cm/s with ratios of 6 & 30) indicating a stenosis of >90%. Distally the internal carotid artery appeared free from atheroma.	Small plaque at the origin of the internal carotid artery but Doppler flow patterns and ratios were normal indicating a stenosis of <50% (103/32 cm/s with ratios of <2 and <8).
The external carotid artery was patent and Doppler flow patterns were normal (164/20 cm/s)	The external carotid artery was patent and Doppler flow patterns were normal (131/22 cm/s)
RIGHT SIDE: >90% stenosis of the internal carotid artery. Normally positioned bifurcation	**LEFT SIDE: <50% stenosis of the internal carotid artery.**

Patient was referred to the vascular surgery team for assessment and management

Summary

Ocular Ischaemic Syndrome plus diabetic retinopathy

Management of the eyes broadly as per advanced proliferative retinopathy

Systemic investigation and management in these patients vital to reduce mortality

QUIZ QUESTION 1

CASE 2

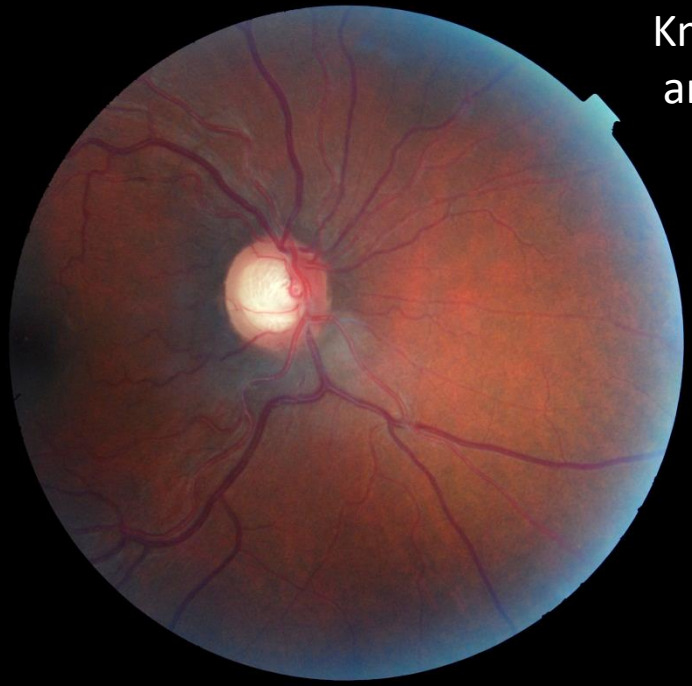
AM

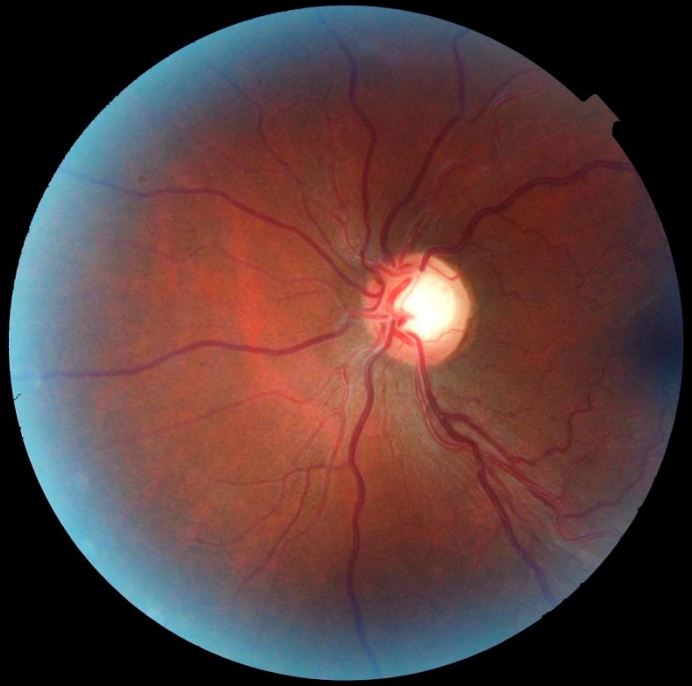
53 Year old male

Type 2 Diabetes

JUNE 2009

Known COAG stable
and well controlled





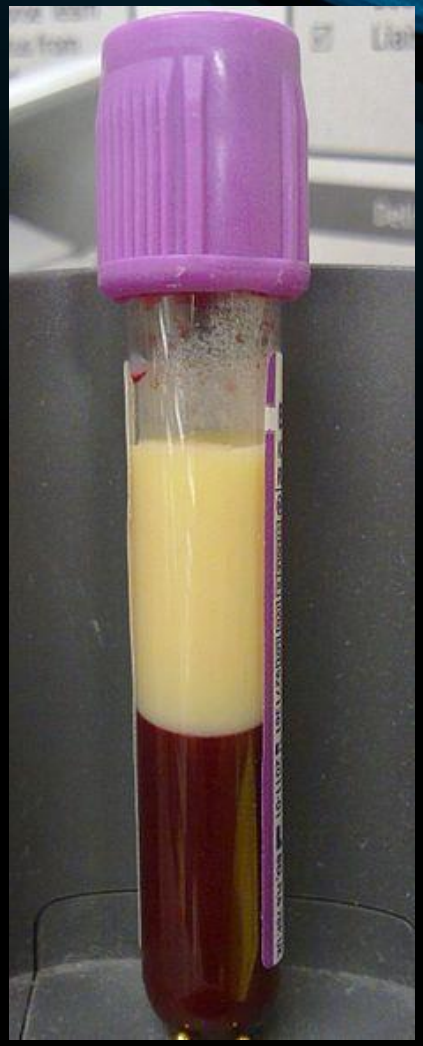

June 2010
Unaided 6/6 BE

Lipaemia Retinalis

- Due to high level hypertrigylceridaemia
  - >2000 mg/dL
  - Normal range <150 mg/dL

- Patients at risk of acute pancreatitis & coronary artery disease

- May also present with eruptive xanthoma
  - 1-3 mm yellow papules on trunk, back, elbows, buttocks, knees, hands, or feet



Eruptive Xanthoma

Causes of Hypertriglyceridaemia

- Primary
  - Various genetic triglyceride metabolism disorders

- Secondary
  - Caused or exacerbated by high fat diet, obesity, uncontrolled diabetes, hypothyroidism, and certain medications eg
    - Protease inhibitors, B-Blockers, steroids, cyclosporin, tacrolimus, Thiazide diuretics

Treatments

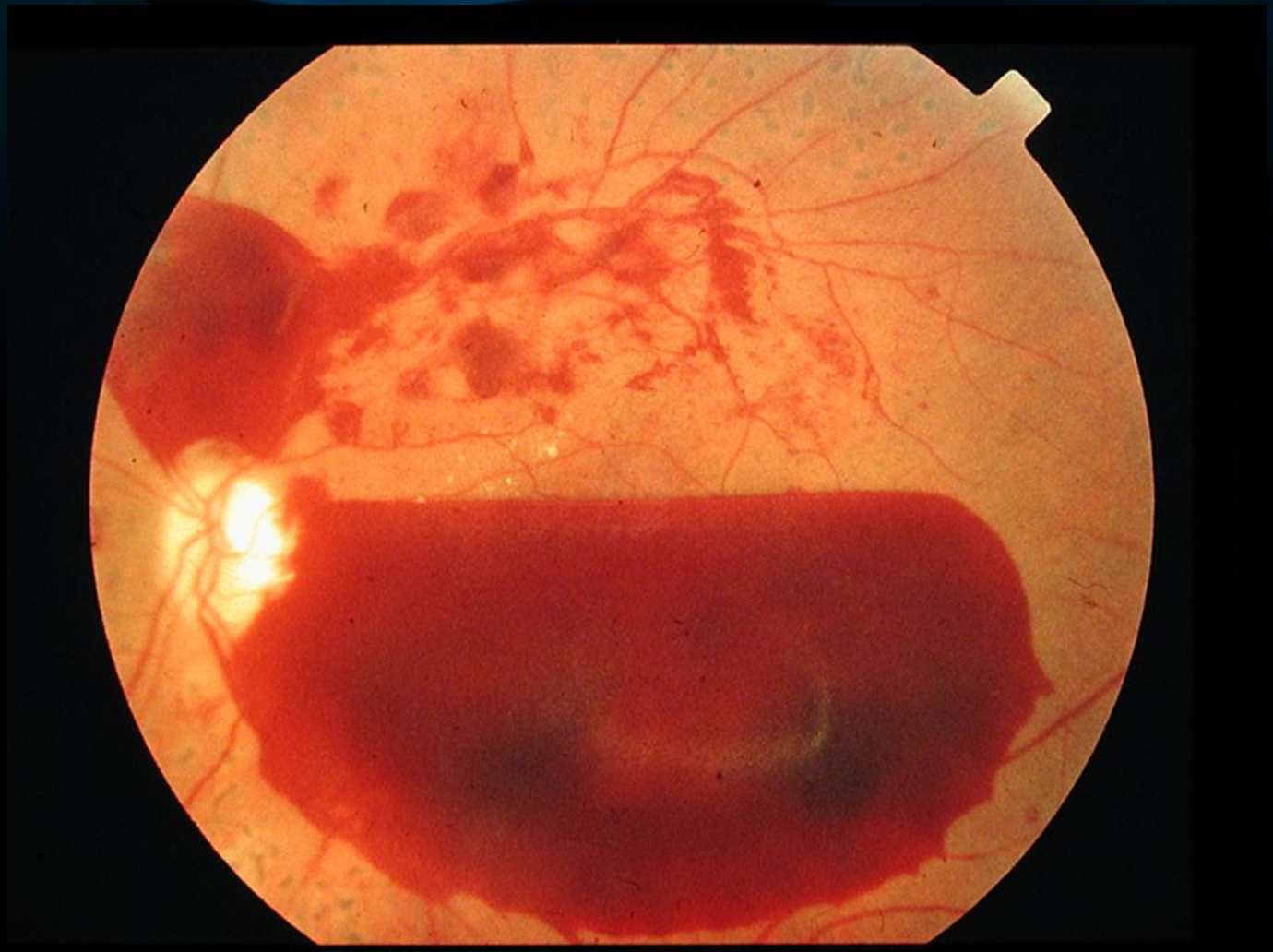
- Therapeutic lifestyle changes:
  - Low saturated fat, carb controlled diet
  - Alcohol reduction
  - Smoking cessation
  - Aerobic exercise
  - High dose Omega 3 fatty acids

- Optimal diabetic control

- Medication: type dependent on aetiology
  - Statins, fibrates, ezetimibe, niacin etc


April 2011

QUIZ QUESTION 2



QUIZ QUESTION 3

Thank you for your attention
Any questions?