

Case notes

Wet macular degeneration

Patient details

Initials: TR

Age: 88 years

Gender: Female

Lifestyle: Retired, non-driver, non-smoker

Hobbies: TV, reading

Reason for visit: Poor VA RE at distance and near for around 1 month; difficulties transferring from light to dark environments

Refraction: RE: -2.00/-0.50x180
LE: -2.50/-1.00x175

Distance Acuity: RE: 6/24, LE 6/9

Reading add: RE & LE: +2.75D

Near acuity: RE: N10, LE: N6

General health: Very frail. Heart failure.

Medication: Enalapril, losartan, amlodipine

Ocular history: Bilateral uncomplicated cataract extractions RE: 2016, LE: 2019; discharged HES

Family ocular history: Parents cataracts

Examination

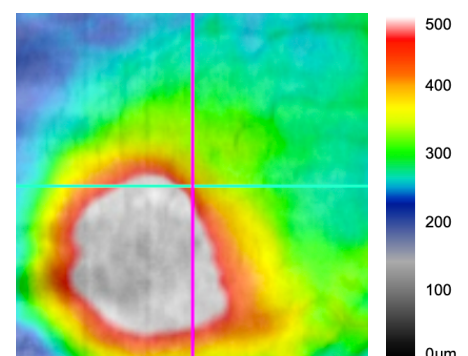
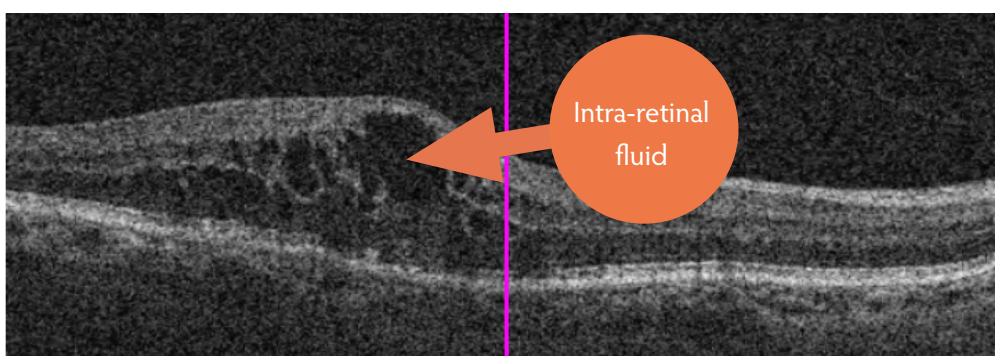
Slit lamp & undilated Volk Superfield

Right eye	Structure	Left eye
Slight ptosis	Lids & lashes	Slight ptosis
Clear	Cornea	Clear
Quiet	Anterior chamber	Quiet
IOL	Lens	IOL
Trace PCO		Trace PCO
C:D 0.40	Disc	C:D 0.40
Shimmer?	Macula	Small drusen
No holes/tears/detachment	Periphery	No holes/tears/detachment

(IOL = intra-ocular lens; PCO = posterior capsular opacification)

Right eye	NCT	Left eye
14mmHg	@11:00	16mmHg
(mean of 3 readings)		

OCT RE



Diagnosis

OCT of TR's right macula shows multiple areas of intra-retinal fluid, which are a sign of wet AMD. The area of swelling shows clearly on the OCT heat map with retinal thickness in excess of 500µm.

The intra-retinal fluid has leaked from macular neovascularisation. NICE Guidance NG82 (2018)¹ classifies the condition as '*late AMD (wet active)*'.

Risk factors

NG82 lists risk factors for developing AMD as: age, AMD in the other eye, family history of AMD, smoking, high blood pressure, BMI of $\geq 30\text{kg/m}^2$, diet low in omega 3 and 6, vitamins, carotenoid and minerals, diet high in fat and lack of exercise.

For patients who are classified by NG82 as having early AMD (eg due to having drusen), the risk of progression to wet AMD is given as **low** for those with medium-sized drusen (63 to 125µm), **medium** for large drusen ($\geq 125\mu\text{m}$), reticular drusen or medium drusen with pigmentary abnormalities or **high** for large drusen with pigmentary abnormalities or reticular drusen with pigmentary abnormalities or a vitelliform lesion with VA better than 6/18 or atrophy $< 175\mu\text{m}$ not involving the fovea.

The central retinal vein can be used as a fundal yardstick for assessing the size of drusen, as its typical diameter is between 120 and 150µm.

Referral

NG82 states that people with suspected late AMD (wet active) should be referred within 1 working day, but not as an emergency.

The HES macula service should offer treatment as soon as possible, within 14 days of referral.

In Annex 4 of the College of Optometrists' Guidance for Professional Practice,² they state that an urgent/priority referral should be made for wet AMD according to the local protocol.

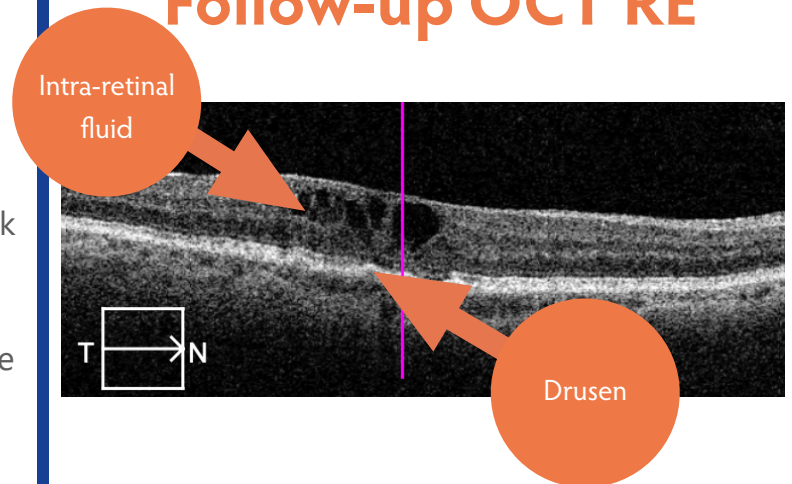
Management

TR attended her local fast-track AMD clinic. She was commenced on a treatment plan of 3 anti-VEGF injections at monthly intervals with a review at 4 months.

Follow-up showed reduced intra-retinal fluid. Small drusen were also evident.

As intra-retinal fluid was still present, a further 3 injections at monthly intervals were planned.

Follow-up OCT RE



New treatments

Around 15 years ago, the introduction of ophthalmic drugs which block vascular endothelial growth factor revolutionised the management of patients with wet AMD.

Attendance at the HES for frequent intra-vitreous injections places a high burden on both the patient and the health service. Therefore, the aim is to develop drugs that require a lower frequency of treatment. Faricimab (Vabysmo, Genentech, San Francisco, CA) is a bi-specific antibody which has action against both VEGF and angiopoietin-2. Studies have shown that many patients can tolerate less-frequent dosing than with other drugs.³

Biosimilar drugs are almost identical to the original product, but are produced at lower cost once the original drug's patent has expired. There is a growing scope for the use of biosimilars in AMD to reduce the cost of treatment to the NHS.

1: NICE Guidance NG82 (2018). <https://www.nice.org.uk/guidance/ng82>

2: College of Optometrists (2023). <https://www.college-optometrists.org/clinical-guidance/guidance/guidance-annexes/annex-4-urgency-of-referrals-table>

3: Khanani *et al* (2020). <https://jamanetwork.com/journals/jamaophthalmology/article-abstract/2768857>