Improving care of multiple sclerosis-associated uveitis in a tertiary referral centre in Northern Ireland.

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Background and aims

There is an association between multiple sclerosis and inflammatory eye disease with a higher than average prevalence of uveitis in those with multiple sclerosis and vice versa[1]. Multiple sclerosis-associated uveitis has distinct clinical features[2], yet there is little guidance on how it should be investigated and treated[3].

We characterize the cohort of patients with multiple sclerosis-associated uveitis attending a tertiary referral centre in Northern Ireland and suggest a series of recommendations to improve patients' diagnosis, follow up and treatment.

Results

25 patients with multiple sclerosis-associated uveitis were identified (71% female). The primary location of uveitis at presentation was 52% intermediate, 24% panuveitis, 12% posterior and 12% anterior. 56% of cases were bilateral at presentation. Figures 1 and 2 illustrate fundus findings. The most common complications were cataract (52%), ocular hypertension (40%), retinal vasculitis (36%), epiretinal membrane (28%) and macular oedema (20%). Visual acuity at most recent clinic was 6/12 or better in both eyes in 52% of patients and 6/24 or better in 72%.

Subtypes of multiple sclerosis were 76% relapsing-remitting, 16% secondary progressive and 8% primary progressive. Age at presentation and length of follow up is presented in table 1. Uveitis presented before demyelinating symptoms in approximately half (52%) of cases.

The most common disease modifying therapies prescribed for multiple sclerosis were: Dimethyl fumarate (36%), beta interferon 1a (28%), glatiramer acetate (12%), teriflunomide (12%), rituximab (8%). The most common oral agents which had been prescribed for treatment of uveitis were oral steroids (56%), mycophenolate mofetil (40%), tacrolimus (16%), methotrexate (16%), rituximab (12%), azathioprine (8%) and adalimumab (8%). Of note, three patients developed symptoms consistent with demyelination whilst on anti-TNFα agents for treatment of their uveitis (one intermediate, one posterior, one panuveitis). This side effect of anti-TNF agents is well documented in the literature[4]. After collaboration between departments a series of recommendations were agreed to be implemented in the trust.

	Mean	Standard deviation	Range
Age at presentation to uveitis clinic	39	15	12-69
Length of follow up in uveitis clinic (years)	8	6	1-20
Age at onset of symptoms consistent with multiple sclerosis	36	14	16-68
Time difference between presentation to uveitis clinic and onset of demyelinating symptom (years)	7	8	0-29

Table 1: Patient age at presentation and length of follow up

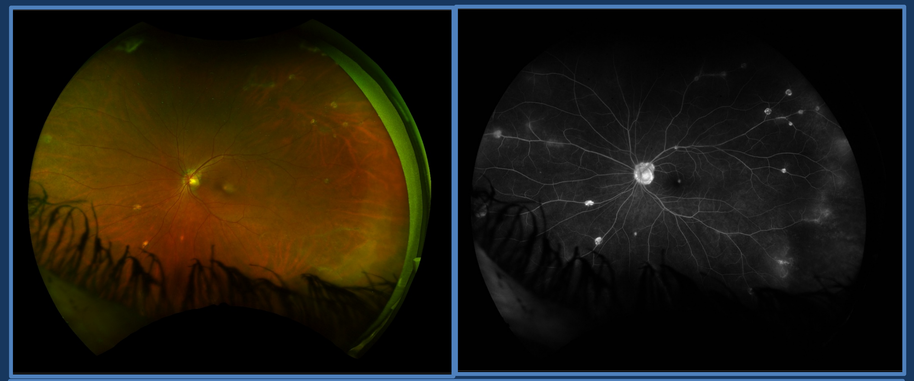


Figure 1. Left fundus of a patient with multiple sclerosis-associated uveitis
a) Optos fundus image displays chorioretinal lesions and patches of pigmentation around retinal vasculature
b) Fluorescein angiogram shows areas of leakage and ischaemic vasculitis in the temporal periphery

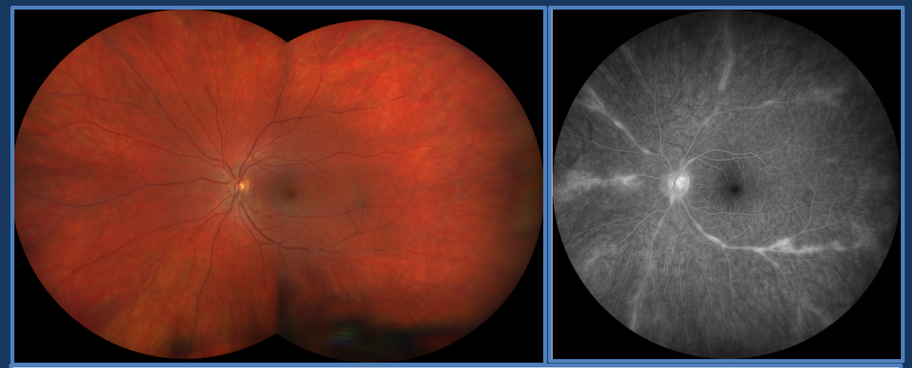


Figure 2. Right fundus of a patient with suspected multiple sclerosis-associated uveitis
a) Fundus photo illustrates subtle sheathing of retinal vasculature
b) Fluorescein angiogram shows marked leakage

Recommendations

- Neurological symptoms should be enquired about in patients presenting with uveitis of all types, particularly intermediate uveitis.
- Where there is clinical suspicion of multiple sclerosis, the ophthalmology team should request an MRI brain and make a referral to the multiple sclerosis specialist within the appropriate trust. Where there are symptoms or signs potentially explained by spinal cord involvement, MRI spinal cord should be requested concurrently with MRI brain.
- Ophthalmology and neurology teams should collaborate in cases of multiple sclerosis-associated uveitis to use treatments which can be beneficial to both pathologies.
- Regarding the use of anti-TNFα agents:
  - Use of these agents as a treatment for uveitis should be avoided in patients with known demyelinating disease.
  - Ensure no neurological symptoms have developed since first presentation of uveitis prior to commencing these agents as a treatment for uveitis and warn patients to report any symptoms developing on treatment.
  - If these agents are being considered as treatment of uveitis clinically suspicious of multiple sclerosis-associated uveitis, neurological imaging should be performed prior to commencing treatment.
  - Treatment cessation should be considered in patients who develop symptoms consistent demyelination whilst on these agents.

References

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