York and Scarborough Optic Neuritis Acute Treatment Guideline

Optic Neuritis can be a manifestation of several different disease processes. The management of a case depends on what type of disease their symptoms, signs, and demographic details suggest that they might have. **The first stage in management is to differentiate which type of disease you are dealing with.**

York and Scarborough have a large majority White British population. Most of these patients will present with idiopathic/demyelinating multiple sclerosis type disease. This is sometimes termed *typical* optic neuritis. In other regions of the world alternative diseases more commonly cause optic neuritis e.g. Aquaporin 4 associated disease/NMO spectrum disease or infectious causes. These have traditionally been grouped as *atypical* optic neuritis as they are less commonly seen in White British patients.

Idiopathic / Demyelinating multiple sclerosis type '*Typical*' Optic Neuritis

• Age < 40yrs. Loss of acuity (Hrs-days) / field - unilateral.

• RAPD, 90% pain in / around eye, usually pain on eye movement.

• Red desaturation. Reduced brightness. 30% photopsia.

• 65% Normal looking disc. May have Uhthoff's phenomenon.

• Worse in first 14 days.

• At 3/52 80% showing signs of starting to recover.

• At 5/52 93% showing signs of starting to recover.

• 14-48% have subclinical problems in the other eye on presentation.

Alternative forms– e.g. Aquaporin 4 / MOG type – 'atypical' Optic Neuritis:

• Bilateral / Severe visual loss / Recurrent

• Aged > 40yrs.

• Country of Birth - African or Far Eastern countries have higher rates of neuromyelitis and low rates of MS.

• Inflammatory findings - Uveitis, Papillitis, Macular star (ODEMS), Retinal infiltrate. e.g.: Sarcoid, Lymes, Cat-scratch, SLE, Syphilis, ANCA …

• Poor visual recovery / worsening after 30 days.

• Exquisitely steroid sensitive.

• Systemic disease (other than MS).

• Other eye signs, like prominent disc oedema and neurological signs

Written August 2024 – M Blizzard, G Heath. Approved by T Button. For review Aug 2026

MANGEMENT Idiopathic / Demyelinating multiple sclerosis type '*Typical*' Optic Neuritis

DISCUSSION: Every patient needs some explanation about their presenting complaint, but different patients will want differing amounts of information about their condition. At the very least, you will need to provide information about the chances of good visual recovery etc. It may be worth explaining, for example, that optic neuritis is an inflammatory condition which may be precipitated, in susceptible individuals, by a virus. In most cases, it is probably reasonable to warn the patient that further ophthalmological or neurological episodes could occur. Patients with typical ON have a 50% lifetime risk of developing MS.

1] Clinicians should explain the association of optic neuritis with multiple sclerosis if they feel confident to do this, or if the patient initiates this discussion. Warn the patient regarding misinformation / unbalanced information from the Internet. If yet more information is required this can be discussed at specialist follow-up. Communicate in the notes and in the letter to the GP regarding the nature of any discussion made. One should stress the good visual prognosis but this can take months to get back to near normal.

2] Junior medical staff should seek senior advice before telling the patient of the diagnosis of Optic Neuritis because:

A) May not be true 'Typical Optic Neuritis'

B) Patient may jump to inappropriate conclusions if not fully informed about multiple sclerosis

VISUAL FIELDS:

1] The Humphrey 24:2 programme is the field analysis should be attempted, but may not be possible if the patient has a dense central scotoma.

2] Fields should be attempted on presentation and 6/52 later if acuity permits.

IMAGING TESTS:

1]In all a patients get baseline OCT macula, OCT RNFL and OPTOS

2] MRI or orbits and brain with contrast should be offered. This can help exclude alternative pathology mimicking neuritis. Additionally, imaging can identify evidence of additional or previous neuroinflammation in the brain. This can allow a more tailored discussion of individual risk of progression to multiple sclerosis at neuro-ophthalmology follow-up. **Please request this on an URGENT basis to in order that the scan can be performed in a timely fashion.**

BLOOD TESTS:

Not routinely required other than renal profile (if patient agrees to undergo an MRI with contrast)

FOLLOW UP: To be decided on an individual patient basis. As a general rule, the patient should be seen 6/52 after presentation (as > 90% should be improving if typical) but they should be seen sooner if 'patients needs' require this. Refer to Neuro-Ophthalmology clinic by email (Morgan Blizzard & Greg Heath).

WHEN TO TREAT:

The Optic Neuritis Treatment Trial shows that Steroids and Interferon do not reduce disability from MS in first episodes of typical optic neuritis cases. Steroids may speed visual recovery but they do not improve long-term visual outcome. The data may not be transferrable for subsequent attacks. Document the decision in the notes.

500mg oral methylprednisolone for 5 days ***can*** be used, even in a first attack, if there is:

- Markedly reduced acuity.
- Severe pain
- Only Eye.
- Occupational need for expedited recovery.
- Informed patient request.

This treatment ***should*** be offered in subsequent episodes affecting a nerve that has previously experienced neuritis

As with any treatment, weigh the potential benefits of medication with the risk of side effects for each individual.

WHEN TO REFER to Neurology (Dr T Button/Dr H Wong):

1] If this is a second inflammatory event, anywhere in the CNS

2] A first attack of Optic Neuritis if associated with other neurological symptoms.

MANAGEMENT Alternative forms– e.g. Aquaporin 4 / MOG type – 'atypical' Optic Neuritis:

VISUAL FIELDS:

1] The Humphrey 24:2 programme is the field analysis should be attempted, but may not be possible if the patient has a dense central scotoma.

2] Fields should be attempted on presentation and 6/52 later if acuity permits.

IMAGING TESTS:

1]In all a patients get baseline OCT macula, OCT RNFL and OPTOS

2] Plain film Chest X-ray

3] Urgent MRI or orbits and brain with contrast must be performed and discussed with radiology to get a prompt fast track appointment. This is to confirm the pattern of neuroinflammation and exclude mimics e.g. compressive optic neuropathy.

4] MRI of the spine should also be requested if there are current or previous symptoms of myelitis.

4]bilateral involvement should prompt neurology inpatient admission for very urgent imaging.

BLOOD TESTS:

Using the standard red/green/brown request card: FBC, U+Es, ACE, ANA, ANCA, MOG antibody test, Aquaporin 4 antibody test

Using the blue microbiology request card: Syphilis serology, Quantiferon Gold (please **state "x2 lithium heparin blood tube**" on the blood request form for this specific test. It is common for phlebotomists to mistakenly use incorrect tubes)

Quantiferon test samples must be received by the lab before 16:00

FOLLOW UP: Notify Neuro-Ophthalmology team (Greg Heath & Morgan Blizzard) by email to arrange early initially review within 2 weeks

WHEN TO TREAT:

Spontaneous, good visual recovery may be less likely in non-MS type optic neuritis. Steroid treatment should be considered in all such cases.

- Either 500mg oral methylprednisolone for 5 days or 3 days 1g IVMP,
- Followed by Prednisolone at 40mg 7 days, then 35mg pending follow-up review

Ensure that correct tests for infectious causes (Quantiferon and syphilis) are performed before treatment. Only delay treatment whilst awaiting these tests if there is clinical suspicion of an infective cause.

WHEN TO REFER to Neurology (ring switchboard and ask for consultant of the week): needs discussing on the same day

1] if there are associated neurological symptoms

2]Urgent inpatient admission via neurology if there is severe bilateral involvement.

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