NHS HOSPITAL LETTER (FICTIONAL)

FOR EDUCATIONAL PURPOSES ONLY

BIRMINGHAM UNIVERSITY HOSPITALS NHS TRUST

Department of Neurology
Queen Elizabeth Hospital
Mindelsohn Way
Birmingham B15 2TH
Tel: 0121 627 2000

NHS Number: 456 123 7890
Hospital Number: QEH27631

GP: Dr. James O'Connor
Harborne Medical Centre
31 High Street, Harborne
Birmingham B17 9NT

Consultant: Dr. Nadia Rahman
Consultant Neurologist (Neuroimmunology)

Date of Clinic: 24 February 2025

RE: CLARKE, Olivia

DOB: 12/08/1988 (36 years)
Address: 42 Bristol Road, Edgbaston, Birmingham B5 7TJ

CLINIC LETTER

Dear Dr. O'Connor,

Thank you for the ongoing care of Ms. Clarke. I reviewed her today in the Neuroimmunology Clinic following her recent hospital admission.

DIAGNOSIS

Neuromyelitis Optica Spectrum Disorder (NMOSD), AQP4-IgG positive

BACKGROUND

Ms. Clarke was initially admitted in January 2025 with a 10-day history of progressive bilateral lower limb weakness, sensory changes below the umbilicus, and urinary retention. MRI revealed a longitudinally extensive transverse myelitis from T2 to T9. Lumbar puncture showed raised protein, mild pleocytosis, and negative oligoclonal bands. Serum tested positive for aquaporin-4 antibodies, confirming the diagnosis of NMOSD. She was treated with intravenous methylprednisolone 1g daily for 5 days followed by plasma exchange, with good but incomplete recovery.

She was discharged two weeks ago on oral prednisolone 40mg daily and newly commenced on rituximab (first infusion completed during admission).

PRESENTING COMPLAINTS

Today she presents for follow-up assessment and immunotherapy planning.

CURRENT SYMPTOMS

Ms. Clarke reports gradual improvement in her lower limb strength, though continues to experience marked stiffness and spasms. She can now walk short distances with a frame but requires a wheelchair for longer distances. She describes altered sensation below the waist with a "tight band" sensation around her abdomen. She is self-catheterising 4-5 times daily for incomplete bladder emptying.

Her vision is currently normal, with no history of optic neuritis to date. She denies any new neurological symptoms.

MEDICATION

1. Prednisolone 40mg OD (tapering regimen)
2. Rituximab (received first infusion 1000mg on 12/02/2025)
3. Baclofen 10mg TDS
4. Gabapentin 300mg TDS
5. Omeprazole 20mg OD
6. Adcal D3 two tablets BD
7. Sodium valproate 500mg BD (for pre-existing migraine)

ALLERGIES

No known drug allergies

SOCIAL HISTORY

Lives with partner in ground floor flat. Works as an accountant, currently on sick leave. Non-smoker. Occasional alcohol.

FAMILY HISTORY

Mother with systemic lupus erythematosus. No other relevant family history.

EXAMINATION

General: Alert, oriented, good cognition.
Observations: BP 132/84, HR 76, SpO2 98% on air.

Neurological Examination: - **Cranial nerves:** Intact. Visual acuity 6/6 bilaterally. Normal colour vision. No afferent pupillary defect. Fundi normal. - **Motor:** - Upper limbs: Normal tone. Power 5/5 throughout. - Lower limbs: Increased tone bilaterally. Power 4/5 hip flexion bilaterally, 4/5 knee extension, 3+/5 ankle dorsiflexion bilaterally. - **Reflexes:** Normal upper limbs. Brisk knee and ankle jerks with sustained clonus bilaterally. Bilateral extensor plantar responses. - **Sensation:** Reduced pinprick and temperature sensation below T6 level. Vibration sense reduced at ankles. Proprioception preserved. - **Coordination:** Normal in upper limbs. Limited assessment in lower limbs due to weakness. - **Gait:** Walks with frame, spastic paraparetic gait pattern.

INVESTIGATIONS

MRI Whole Spine (21/02/2025): Significant improvement in the previously noted longitudinally extensive T2 hyperintense lesion from T2-T9. Residual cord signal abnormality remains with some cord atrophy developing at the T4-T6 levels. No new lesions.

MRI Brain (21/02/2025): No evidence of demyelinating lesions or other pathology. No lesions in areas typical for NMOSD (e.g., area postrema, diencephalon, or periventricular regions).

Blood Tests (24/02/2025): - FBC: Normal - U&Es: Normal - LFTs: Normal - CRP: <5 mg/L - CD19 B-cell count: <0.01 x10^9/L (depleted post-rituximab) - Urinalysis: Negative for infection

ASSESSMENT

Ms. Clarke has AQP4-IgG positive Neuromyelitis Optica Spectrum Disorder presenting initially with longitudinally extensive transverse myelitis. She has responded well to initial treatment with steroids and plasma exchange followed by rituximab. She shows ongoing recovery though with residual paraparesis, sensory changes, and neurogenic bladder.

She requires ongoing high-dose immunosuppression to prevent further relapses, which can be devastating in NMOSD. Her initial B-cell depletion following rituximab has been achieved successfully.

PLAN

1. **Immunotherapy:**
   - Continue prednisolone taper: 40mg daily for 2 more weeks, then reduce by 5mg every 2 weeks to 20mg daily, then by 2.5mg every 2 weeks to 10mg daily, then maintain at 10mg daily long-term
   - Second rituximab infusion (1000mg) scheduled for 12/03/2025
   - Subsequent rituximab dosing to be guided by CD19/20 cell counts at 6-monthly intervals
2. **Symptom Management:**
   - Increase baclofen to 20mg TDS for spasticity
   - Continue gabapentin 300mg TDS for neuropathic pain
   - Neuro-urology review scheduled for 10/03/2025 for bladder management
3. **Rehabilitation:**
   - Continued neurorehabilitation as an outpatient
   - Community physiotherapy to continue twice weekly
   - Occupational therapy assessment for home adaptations completed
4. **Monitoring:**
   - Monthly blood tests including FBC, U&Es, LFTs while on high-dose prednisolone
   - 3-monthly AQP4-antibody monitoring
   - Annual MRI brain and whole spine
   - Bone density scan due to long-term steroid therapy scheduled for next month
5. **Patient Education:**
   - Provided written information about NMOSD
   - Discussed early warning signs of relapse requiring urgent medical attention
   - Discussed need for long-term immunosuppression and infection risk
6. **Follow-up:**
   - Neurology clinic review in 3 months
   - Telephone review by MS/NMO Specialist Nurse in 4 weeks

Ms. Clarke understands her diagnosis and the importance of long-term immunosuppression. We have discussed that NMOSD is distinct from multiple sclerosis and requires different treatment approaches. She has been registered with the UK NMO Service in Liverpool and will be eligible for their advice and research opportunities.

Thank you for your ongoing care of this patient. Please do not hesitate to contact me if you require any further information.

Yours sincerely,

Dr. Nadia Rahman
Consultant Neurologist
GMC No: 6123456

Cc: - Ms. Clarke - NMO Specialist Nurses - Neuro-rehabilitation Team - UK NMO Service, The Walton Centre, Liverpool

Dictated by: Dr. Nadia Rahman
Typed by: MK
Date: 24/02/2025

THIS IS A FICTIONAL DOCUMENT CREATED FOR EDUCATIONAL PURPOSES ONLY