

82×10⁹/L. Electrolytes, urea and creatinine were normal. There was mild liver enzyme derangement (ALT 24 U/L, AST 43 U/L, ALP 76 U/L, GGT 37 U/L), low albumin (27 g/L) and elevated lactate dehydrogenase (259 U/L). Vitamin B12, folate and iron were replete. Haemolytic and disseminated intravascular coagulation screens were negative. Coagulation profile was normal. C reactive protein was raised to 20.8 mg/L. Blood and stool cultures were negative. Dengue virus NS1 antigen and IgM antibodies were positive. Respiratory multiplex PCR and malaria testing were negative. Cytomegalovirus serology indicated previous infection. Antineuronal antibody panel was negative. MRI brain scan showed two focal areas of nodular leptomeningeal enhancement in the left occipital region as well as over the left frontal cortex (Figure 1).

The patient received supportive care. Her symptoms had largely resolved at follow up, one month after initial presentation.

Discussion

We consider this to be a case of ACA due to dengue fever with warning signs.³ This represents an intermediate category of dengue severity that requires strict monitoring and supportive care.³ Other potential causes of ACA have been excluded and the syndrome occurred concurrently with typical clinical and laboratory features of dengue virus infection.¹ This case is important because it records this rare complication in a traveller returning to a non-endemic area and demonstrates neuroimaging abnormalities.

Neurological manifestations of dengue are uncommon and include encephalopathy, encephalomyelitis, immune-mediated phenomena, neuro-ophthalmic and neuromuscular disorders.¹ Cerebellar ataxia has been reported in endemic areas.⁴

Neuroimaging and serological testing in this case show no evidence of a vascular, neoplastic, paraneoplastic, demyelinating or toxic cause. CSF examination was not performed, however the clinical (rash, abdominal pain, fever) and laboratory (thrombocytopenia, liver enzyme derangement, positive serology) features favour the diagnosis of dengue-related ACA.

Dengue virus causes neurological sequelae via direct viral neurotropism, delayed post-infectious immunological mechanisms and systemic metabolic derangements.^{2,3,5} The former pathogenic mechanism is most likely in this case given the early development of ACA in the setting of acute dengue virus infection. Autopsy studies demonstrating dengue antigens in cerebellar tissue offer further support for this mechanism.⁵

Imaging findings in dengue virus infection are variable and can include meningeal enhancement, as seen in this case⁶ (Figure 1). The location of these changes do not correspond to the clinical picture of ACA and may reflect a more generalised meningeal inflammatory response to the virus. The absence of cerebellar changes is not uncommon.⁴

Prognosis is generally favourable,^{2,4} as seen in this case, although dengue virus infection can be fatal.¹

This case highlights the importance of including dengue virus infection in the differential diagnosis of ACA in travellers returning from endemic areas.

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The British Neurotoxin Network



Queens College, Oxford – 24th-25th September 2020

The BNN is an independent network of neurotoxin injectors (mainly consultants neurologists, but also ophthalmologists, maxillofacial, ENT) in the UK and its aim is to share and promote best practice.

Meeting programme

- Extending the therapeutic field of Botulinum toxin covering the indications of Botulinum toxin in neuropathic pain, in ophthalmology beyond blepharospasm, in dermatology beyond cosmetic, and in gastroenterology.
- Exploring the physiopathology of dystonia and its relation to Dopamine.
- Talking to a patient just diagnosed with cervical dystonia adjusting expectations and giving him the keys for self management.

Who is the meeting for?

The meeting is reserved to UK Botulinum toxin injectors, who are BNN members. To become a member, you need to register for free on the website www.neurotoxinnetwork.org.

Booking and fees

Thursday 24th from 2pm until Friday 25th at 1pm.

Book at <https://mondale-events.co.uk/event/british-neurotoxin-network-2020-annual-meeting/>

Fees: £80.00 per person for Consultants and Associate Specialists. £50.00 per person for Nurses, Physiotherapists, Speech Therapists and Orthoptists. *Accommodation is available on a first come, first served basis for those delegates attending the two days.*



The British Neurotoxin Network 2nd October 2020



**The Wellcome Collection – London
The Meige syndrome**

The BNN is an independent network of neurotoxin injectors (mainly consultants neurologists, but also ophthalmologist, maxillofacial, ENT) in the UK and its aim is to share and promote best practice.

Meeting programme

Clinical phenotypes, physiopathology and therapeutic management of Meige syndrome or craniocervical dystonia will be presented.

Who is the meeting for?

BNN members with experience in treating dystonia, who want to learn more about the complexity of the clinical syndrome and its management.

Booking and fees

One day meeting, 9.30 am - 4.30 pm

Book at <https://mondale-events.co.uk/>

Workshop fees: £125 including lunch and coffee break
Clinical CPD points: 5



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