Reviewer’s report

**Title:** Neuromyelitis optica (Devic's disease) Case report of a diagnostic dilemma in a resource limited setting

**Version:** 1  **Date:** 4 April 2013

**Reviewer:** Maria Isabel Leite

Which of the following best describes what type of case report this is?: Other

If other, please specify:

case reptr of a patient with disease diagnosed only clinically and imagiologically; no laboratory confirmation

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: No

Is this case worth reporting?: Yes

Is the case report persuasive?: No

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: No

Comments to authors:

Neuromyelitis optica (Devic's disease); Case report of a diagnostic dilemma in a resource limited setting

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The authors described an African female patient with a recurrent neurological disease that fits in the features of the neuromyelitis optica, which has been
recently found to be associated with AQP4 antibodies.

The authors highlight the fact that the clinical and imaging pictures of the disease are keeping with the diagnosis of NMO and that the lack of conditions for some laboratory studies such as the detection of oligoclonal bands and of AQP4 antibodies do not preclude the diagnosis and the correct treatment approach in cases like the one described.

The authors have a good description of the case. The picture is unfortunately of poor quality, and I have concerns re the identifying elements that it has. I believe that the authors or editorial office will be able to correct those aspects of the picture (very important issue).

Abstract is fine. In the first line of its conclusion, the authors should delete the word “new”, since the phenotype described is not new within the NMO.

In contrast to the description of the clinical case, I am slightly disappointed with the introduction and discussion. These should be simpler, shorter and more focused.

Authors should emphasise that their case report fulfils the clinical criteria for NMO (2006), even without having access to the lab test of NMO-IgG or AQP4 antibodies. In addition, the fact that this is an African patient increases also the chance of having NMO in contrast with MS, which is much rarer in Black populations than in white ethnic groups. As the authors say, and I fully agree, a high degree of suspicion of NMO is required in Black patients with features of demyelination of the central nervous system, especially affecting optic nerve and spinal cord. If this starts being a practice, then more patients can be diagnosed promptly and treated to prevent more attacks and consequent disability. There is, however, no evidence that NMO is more frequently found in Black populations than in White populations.

In more detail, in introduction there is no need to go back to Devic’s description and past confusions between Devic’s and MS.

There is a statement that does not seem accurate and is confusing; I suggest it is corrected and references are better chosen, or is deleted: “A number of cases of Neuromyelitis optica (NMO) have been reported in Africans and few cases have been reported in the white ethnic group (3-5)”.

The discussion is too long and not focused. I could not understand well what the authors mean with the following sentence: “The disorder is either a distinct inflammatory demyelinating disorder of the CNS of as yet unknown aetiology, or a varied form of MS (ADEM/NMO) occurring in a population (where the genetic trait and environmental factors for MS do not exist) with a low risk for MS (7)” It is important to recognise that currently, NMO is well known clinically and imagiologically, and also pathologically; particularly relevant is the recent discovery of the antibodies to AQP4, which constitute the biological, aetiological and immunopathological marker of the disease. There are still questions regarding the potential genetic factors, which may help to explain the female preponderance and association with other autoimmune manifestations. Because
so far there have been no clear evidence of differences in prevalence of the NMO in distinct populations, ethnicities or geographic areas across the globe, one cannot be certain about any genetic influence on the relation between NMO and ethnicity. One could however, comment on the fact that NMO may affect differently people from different ethnicities and ages, which may be related to genetic factors, but also to structural or immune aspects.

The final conclusions of the manuscript are good and summarise well the main message of the manuscript/case report.

Better references would also improve the manuscript greatly. If authors have difficulty finding some full text papers, the editorial office could possibly help them to get full texts.

I wish to see the manuscript again when corrected, shorter, more focused and very clear.

**Quality of written English:** Needs some language corrections before being published

**Declaration of competing interests:**

I have no conflict of interests