Reviewer's report

Title: Acute illness associated with Ehrlichia sp. P-Mtn from Atlanta, Georgia, USA: a case report

Version: 2 Date: 14 February 2008

Reviewer: Karen Bloch

I am familiar with the literature and believe that this case meets one of the 7 criteria for evaluation in the journal: Presentations, diagnoses and/or management of new and emerging diseases

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

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

Comments to authors:

The authors report a case of a patient with ehrlichiosis caused by a newly described species that has never previously been reported in humans, with the diagnosis confirmed by PCR of whole blood. This is an interesting & novel report. Substantiative comments on the content are below:

1. While it is notable that no Rickettsial DNA was amplified from pts blood, PCR is notoriously poor for diagnosis of RMSF, and serology is the gold standard. Were R. rickettsii titers performed? If not, how can the authors be sure this wasn’t RMSF responsive to doxy?

2. No discussion is made of the genetic relationship between this newly described organism & other Ehrlichia spp. Is this phylogenetically close to chaff? Ewingii? This has potential bearing on serologic cross-reactivity.

3. There needs to be a more complete discussion of the significance of this finding for clinicians...lower threshold for empiric therapy and if so, in what pt population? Increased need for whole blood PCR in pts with possible tick-borne disease? What are the implications of this new human pathogen???
Specific comments to improve the case report:

Abstract:
1. Only 2 spp. of Ehrlichia cause dz in the US--sennetsu causes human infection in Japan. Clarify or correct.
2. The authors allude to a "sore neck"--on exam was this felt to be nuchal rigidity? Musculoskeletal? A better clinical exam would be helpful here.
3. Recommend including a sentence that paired serology was performed and was inconclusive.

Introduction:
1. Cite the sentence about treatment abrogating serologic response
2. I am confused by the sentence "Only E chaff is available for serologic...increasingly relies on PCR". These seem like 2 true but unrelated facts. Clarify or separate into 2 sentences.

Case:
1. Was the male previously healthy? Any immunodeficiency? Steroids?
2. Awkward phrasing, suggest "USA presented with a complaint of neck soreness for 3 weeks."
3. More historical details & PE would be useful. Was there photophobia? Nuchal rigidity? Reproducible tenderness with palpation of SCM or trapezius? Focal neuro exam? Was any bloodwork done prior to starting doxy? Imaging?
4. The time frame of 48-60 hours seems sort of random. More typically would go by 24hr increments (48-72 hours).

Lab testing:
1. I would recommend putting the CBC results in the case presentation. They are out of place in lab testing.
2. Recommend putting IgG before "32 (15 Oct).

What next?: Accept after minor revisions

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