Reviewer's report

Title: Multilevel Lumbar Spine Infection due to Poor Dentition in an Immunocompetent Adult: A Case Report

Version: 0 Date: 03 Sep 2017

Reviewer: Otabek Yangibaev

Reviewer's report:

1. Do you believe the case report is authentic?
   Yes/No
   Yes

2. Do you have any ethical concerns? Please consider if local Institutional Review Board approval or ethical approval was obtained (if appropriate) and if the patient (or their parent or guardian in the case of children under 18) gave written, informed consent to publish this case and any accompanying images. A statement to this effect should appear in the manuscript.
   Comments:
   No concerns

3. Does the Introduction explain the relevance of the case to the medical literature?
   Yes/No
   Yes

4. Does the article report the following information? Where information is missing, please specify.

   a. The relevant patient information, including:
      - De-identified demographic information (age, gender, ethnicity)
      - Main symptoms of the patient
      - Medical, family and psychosocial history
      - Relevant past interventions and their outcomes
b. The relevant physical examination findings

c. Important dates and times in this case (if appropriate, organized as a timeline via a figure or table); if specific dates could lead to patient identification, consider including time relevant to initial presentation, i.e. initial presentation at T = 0, follow up at T = 1 month.

d. Diagnostic assessments, including:
   - Diagnostic methods
   - Challenges (e.g., financial, language/cultural)
   - Reasoning and prognostic characteristics (e.g., staging), where applicable

e. Types and mechanism of intervention

f. A summary of the clinical course of all follow-up visits

Comments:

All above points were presented in a satisfactory way.

Only missing, but not essential, part is follow up information (if this was available).

However, unless authors targeting quite specific and expert group of readers, clear conclusions of the results of these radiological test were not disclosed,

For example:

"There was clear involvement of the L5-S1 interspace with associated edema of the endplates, though no frank destruction was identified." Is this description of discitis?

Until reader further down encounters below statements and comparatively analyses:

"Upon referral, lumber spine MRI demonstrated progression of discitis now involving L3-4 through L5-S1 (Figure 1; A and B)." after that reader can extrapolate that formerly authors probably were referring to discitis.
Similarly:

"Mild T2 hyperintensity at the L4-L5 interspace in the presence of a ventral abscess and ventral epidural thickening indicated probable involvement at this level." A question remains "ventral epidural thickening" describes what process? And again, until further in the text reader finds a statement that is likely to be relevant:

"There was progression of mild enhancement of the L4 and L5 vertebral bodies indicative of osteomyelitis", and a reader can conclude that formerly mentioned description probably refers to the process of osteomyelitis.

5. Is the interpretation (discussion and conclusion) well balanced and supported by the case presented?

Comments:

Balance in the discussion of the manuscript is well maintained.

6. Is the anonymity of the patient protected? Please consider any identifying information in images such as facial features or nametags, whether the patient is named etc. If not, please detail below.

Yes/No

Yes

7. Is the Abstract representative of the case presented?

Comments:

The abstract is well presented and provide a brief summary of important aspects of the manuscript.

8. Does the case represent a useful contribution to the medical literature?

Comments:

Yes

9. Additional comments for the author(s)?

The manuscript is very well written and it is pleasure to read.
The style of English language up to highest academic standards, the whole manuscript is brief and concise.

However, I had only a few humble suggestions for the consideration of the authors.

Some very few minor typos were scattered throughout, and only some of them were mentioned below, hence professional proofreading and corrections would be beneficial:

On the first paragraph of the introduction, there is a typo mistake "minigitis" to be "meningitis".

In the second sentence of the case report (page 4, line 12) "… episode …"(singular) does not match with (plural) "… fevers, rigors and generalized arthalgias", and probably "arthralgia" rather than "arthalgia".

On the same page as above, on lines 19-24 the statement requires slight correction "Physical examination was significant for a mildly distressed appearing male and the musculoskeletal examination demonstrated diffuse tenderness in the lumbar spine area to percussive palpation without associated swelling, erythema or evidence of trauma." Authors might want to say "General examination…” rather than "physical examination" since authors again mention "musculoskeletal examination" (i.e. physical examination).

In the line 34 authors kindly mentioned "… rapid influenza A and B were negative", probably would be better to say " … rapid influenza A and B immunoassays were negative" and would provide the readers with clarity and also mention the reasoning of this test would be even credulous.

On page 5, line 9 - "lumber" please, change to "lumbar"

On this same page, "Upon referral, lumber spine MRI demonstrated progression of discitis now involving L3- 4 through L5-S1" to clarify the disease progression, I would suggest mentioning after how many days from first MRI and commencing the intravenous antibacterial treatment (if) repeated MRI happened.

However not being essential, providing comparative images would be desirable.

Was the MRI with gadolinium contrast or non-contrast?
On line 29, I would suggest clarifying to the reader what is Panorex, as it appears in the text - "… and Panorex demonstrated…", or alternatively changing this to something like "Panorex view" or "Panorex view on x-ray".

On line 34, the sentence "Ten teeth were extracted…" would better sound if it would start with something like "As a part of treatment ten teeth were extracted …".

With the best wishes

Reviewer.

Level of interest
Please indicate how interesting you found the manuscript:

An article of limited interest

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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