Author’s response to reviews

Title: Mycobacterium arosiense, an unexpected cause of osteomyelitis in a patient with sarcoidosis: a case report

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Author’s response to reviews:

BMC Infectious Diseases
Dear Editors and Laura Rindi,

We submit our revised manuscript (INFD-D-19-01581R1) entitled “Mycobacterium arosiense, an unexpected cause of osteomyelitis in a patient with sarcoidosis: a case report” to BMC Infectious Diseases.

We were pleased to receive the reviewer’s comments and we have corrected the manuscript accordingly and fully addressed all the reviewer’s points below.

Reviewer reports:

Paulo Melendez (Reviewer 1):
First of all, while it is possible to understand the article for the most part, I think its language could use some polishing. I recommend that the authors look into one of the options posted on the BMC website to improve their writing in English.

The article was written by Didi Bang who is fluent in the English language. However, we do recognize that there was need for some language polishing. We have made use of the suggested website service and corrected the text throughout the manuscript.

This is an interesting case, the authors are trying to make the case that this patient might have had Mycobacterium arosiense infection for a long time, misdiagnosed as sarcoidosis and exacerbated by the use of steroids. It would be helpful to have some more information to make the case stronger. I have some suggestions below:

Did the patient have other laboratory evidence of sarcoidosis when he received that diagnosis 6 years prior? Please include that information.

The patient had elevated CRP, erythrocyte sedimentation rate, and Angiotensin-converting enzyme at the time of diagnosis. This information has been included the manuscript on page 4, line 76-78.

For how long was the patient treated with steroids for the presumed sarcoidosis? Was he receiving treatment with steroids at the time of his spinal infection?
The patient was treated intermittently with steroids from the time of sarcoidosis diagnosis for years. We have included this information in the text on page 5, line 80-81.

The patient was receiving treatment with steroids at the time of the spinal infection we have changed the sentence to read “was currently treated with prednisolone 2.5 mg q.d. monotherapy” on page 5 line 81-82.

Was the testicular biopsy specimen sent for cultures? And why was it done?

Yes, the specimen was sent for culture, which was negative. We have included this information on page 4, line 75-76. The biopsy was examined during a fertility assessment, which is now included in the text on page 4, line 74-75.

Was there any chest imaging available from the time of the sarcoidosis diagnosis and from the time of the MAC diagnosis? And was it suggestive of MAC pulmonary disease at all? Were there any prior lung biopsy or respiratory specimens sent for culture at any point?

Chest X-ray examination was available at the time of the sarcoidosis diagnosis and showed bilateral infiltration and hilar lymphadenopathy, which we have included in the text on page 4, line 73-74. Chest X-ray from the MAC diagnosis had regression of infiltration and unchanged hilar lymphadenopathy, which we have included in the text on page 5, line 94-95.

Lung biopsies were not performed as the chest X-ray findings were minimal. Respiratory specimens were sent for culture we have included this information on page 5, line 95-96.

Was there radiologic resolution of the hilar adenopathy after antibiotic treatment?

There was some resolution of the hilar adenopathy after antibiotic treatment. We have included this information on page 8, line 164-165.

Line 162: How would routine 16s rRNA gene sequencing to identify Mycobacterium arosiense change management in these patients? Would it be cost effective? Perhaps this should be discussed a little more. Are there any implications other than underestimation of its real incidence?

It is unknown whether routine 16sRNA gene sequencing to identify Mycobacterium arosiense may change the management of these patients. As the cases described are very few. Some members of the MAC have been shown to have poor treatment outcomes. Even though sequencing platforms have become more affordable and the cost effectiveness of sequencing it is difficult to predict the consequences. We have therefore in the “Discussion” included the following text and a new reference on page 9 line 175-179. The consequences of differentiation of the Mycobacterium arosiense from the MAC are unknown. Some organisms within the MAC complex such as Mycobacterium chimaera have poor treatment responses. The recent introduction of affordable sequencing platforms may increase our knowledge on the management and treatment of patients suffering from Mycobacterium arosiense infections. The reference for Mycobacterium chimaera is included on page 9, line 177.

Bennie Lindeque (Reviewer 2): The heading represents the contents. The contents is written in good English. The contents is scientific and relevant and contributes to scientific knowledge of NTM infections Line 73 the word testis biopsy should probably read test biopsy. The outlay meets standards for publication.
We have changed the word “testis” to testicular on page 4 line 74.

To our knowledge this is the second case of osteomyelitis caused by Mycobacterium arosiense complicated by sarcoidosis ever to be reported.
We have text changes in a new revised version with track changes.
We look forward to hearing from you. On behalf of all co-authors, Didi Bang, Erik Michael Rasmussen, and Aase Bengaard Andersen

Yours sincerely,
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