Author’s response to reviews

Title: 18F-fluorodeoxyglucose–positron emission tomography/computed tomography for the diagnosis of polymyalgia-like illnesses: A retrospective study

Authors:

Hideyuki Horikoshi (h.horikoshi@ndmc.ac.jp)
Takashi Nakanishi (flipper0503jp@yahoo.co.jp)
Katsumi Tamura (tamurak@nn.iij4u.or.jp)
Fumihiko Kimura (fkimura@ndmc.ac.jp)
Kenji Itoh (kenji-tky@umin.ac.jp)

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Author’s response to reviews:

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BMC Rheumatology
Editor
Dr. James Mockridge

Dear Dr. Mockridge

Please find our revised manuscript entitled “18F-Fluorodeoxyglucose–Positron Emission Tomography/Computed Tomography for the Diagnosis of Polymyalgia-like Illness,” which we would like to submit for publication in BMC Rheumatology as a Concise Communication. Our manuscript includes one figure and three tables.

The answers to the reviewers and revised points are attached below.

The symptoms of various inflammatory conditions such as infection, vasculitis, arthritis, myositis, and neoplasms may be similar and sometimes fulfill the diagnostic criteria of PMR. Therefore, it is often difficult to distinguish PMR from the so-called “polymyalgia-like illness”. 18F-FDG–PET/CTs have been adapted to diagnose PMR, and FDG accumulation in the PMR-specific sites has been reported. Moreover, to the best of our knowledge, there are no imaging studies that have compared PMR and polymyalgia-like illness.

In the present study, we compared the FDG–PET/CTs findings between PMR and polymyalgia-like illness. Interestingly, patients with polymyalgia-like illness showed significantly low FDG accumulation in the PMR-specific sites. Various patterns of FDG uptake in patients with polymyalgia-like illness revealed the diversity of pathogenesis in similar clinical presentations. Moreover, along
with the current diagnostic criteria, the accumulation pattern of FDG in PMR-specific sites may increase the accuracy of the diagnosis of PMR.

We believe that the findings described in the present study will be of special interest to the readers of BMC Rheumatology.

The manuscript has not been submitted and is not currently being submitted elsewhere until a decision has been made as to its publication in BMC Rheumatology and no portion of the data has been or will be published in proceedings or transactions of meetings or symposium volumes. All the authors have read the manuscript and have approved this submission.

We would be grateful if the manuscript is reviewed and considered for publication in BMC Rheumatology.

Thank you very much for your consideration.

Sincerely yours,

Kenji Itoh, M.D., Ph.D.
Division of Hematology and Rheumatology
National Defense Medical College
3-2 Namiki
Tokorozawa, Saitama 356-8513, Japan
Phone: +81-4-2995-1511
Email: kenji-tky@umin.ac.jp

Answer to the reviewers

We appreciate the reviews of our manuscript. We have revised our manuscript in accordance with the advice and insights of the reviewers, as discussed below.

For reviewer 1:

We appreciate your advice and suggestions. As per your advice, we have improved the quality of our manuscript.
We apologize for this error; we have added a space before “(19)” in the revised manuscript (page 12, lines 210–211).

For reviewer 2,

We appreciate your advice and suggestions. As per your advice, we have improved the quality of our manuscript.

Major Concerns:

1. The multivariable analysis should not be adapted in this study because the number of sample is low. If you use three variables for multivariable analysis you need at least 30 subjects in each group.
The other analysis such as univariable analysis should be adapted in this study.

Response: We agree with your comment and apologize for choosing the incorrect statistical method. We have reconducted the univariate analysis and ROC analysis. Even after changing the statistical method, FDG accumulation in the shoulder joints was a significant finding. Based on the results, we have revised the manuscript (page 6, lines 124–126; pages 9–10, lines 173–176; page 10, Table 3; page 12, lines 219–221).