Reviewer’s report

Title: The value of 99mTc-methylene diphosphonate Single photon emission computed tomography/computed tomography in diagnosis of fibrous dysplasia

Version: 1 Date: 11 Jun 2017

Reviewer: Yingxin Chen

Reviewer's report:

FD is a benign bone disease characterized by a maturation disorder of the mesenchymal tissue with lamellar replacement of the medullary cavity by an abnormal fibrous tissue. The lesions/disease can affect a single bone or multiple bones. They are/it is often an incidental radiological finding/s since they are/it is usually asymptomatic. The diagnosis of FD could not always be established only by WBS, which often need to combine with an anatomical imaging (such as X-ray, CT, or MRI). Following the development of Hybrid SPECT/spiral CT, FD were exhibited with diagnostic-quality CT and SPECT images to clearly view of the anatomic sites of the lesions.

Compared to previous case reports of SPECT/CT, authors retrospectively reviewed WBS and SPECT/CT images on 21 patients with FD to conclude characteristic appearance and to determine whether there was any osseous metastasis.

Overall, the manuscript is relatively well written. However, I have a number suggestions detailed below.

1. Did authors use commercial statistical analysis software? If yes, please provide the detail of this software.

2. Please check the sequence of all figure. It would be Axial CT (b), SPECT (c), and hybrid SPECT/spiral CT imaging (d).

3. Did author compare the sensitivity and specificity of SPECT with other imaging (CT, MRI, PET or X-ray)? If yes, please provide more date to support the conclusion that abnormal radiotracer uptake of 99mTc-MDP is helpful for the diagnosis of FD.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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

Needs some language corrections before being published

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