Title: Relations between the Crowe Classification and the 3D Femoral Head Displacement in Patients with Developmental Dysplasia of the Hip

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Reviewer: Sakai T

Reviewer's report:

This paper reports the relationship between the Crowe classification (group I, II, III) and 3D femoral head displacement in patients with developmental dysplasia of the hip (DDH). 60 DDH patients and 55 healthy demography-matched controls (osteonecrosis) were analyzed. The center of the femoral heads of DDH patients was significantly more anterior, superior, and lateral than those of the healthy controls. The severity of the DDH using the Crowe classification (group I, II, III) was related to the degree of the femoral head displacement in the superior-inferior direction, not in the medial-lateral and anterior-posterior directions.

Although this report is well-conducted and well-written, the Reviewer has some minor concerns.

First, the femoral anteversion is not investigated.

In original definition of Crowe classification, not type I,II,III, but group I,II,III.

The Crowe group II showed the largest average anterior displacement followed by the group III then group I with no significant differences. Why group II?

The Crowe group I showed the largest average lateral displacement followed by the group III then group II with no significant differences. Why group I?
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.

Yes

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:

Acceptable

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