Reviewer’s report

Title: Novel NOG (p.P42S) mutation causes proximal symphalangism in a four-generation Chinese family

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Reviewer: Jingyu Liu

Reviewer's report:

In this manuscript, the authors report a novel missense NOG mutation (c.C124T:p.P42S) in a four generation Chinese family affected by proximal symphalangism (SYM1). NOG mutations have been associated with several phenotypes, including multiple synostoses syndrome-1 (SYNS1), Proximal symphalangism (SYM1), Tarsal-carpal coalition syndrome (TCC), Stapes ankylosis with broad thumbs and toes (SABTT), Brachydactyly type B2 (BDB2), and over 40 mutations has been reported. In 2008, Oxley et al. reported a family affected with SYNS1, caused by the amino acid substitution of proline to arginine at codon 42 (p.P42R) of Noggin, the same mutational position that found in this study. This study only identified a novel mutation of NOG in a Chinese SYM1 family, which does not report new clinical findings of SYM1 or bring novel functional studies of Noggin protein.

Minor issue:

In Page2, line 51, "Whole exome sequencing revealed a novel homozygous missense mutation in the NOG", the word "homozygous" should be "heterozygous".

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.

Not relevant to this manuscript

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

Needs some language corrections before being published

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