Reviewer's report

Title: Genetic relevance and determinants of mitral leaflet size in hypertrophic cardiomyopathy

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Reviewer: Andrea Borghini

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In this interesting study, Chung et al. investigated the genetic relevance and determinants of mitral leaflet size by performing an extensive hypertrophic cardiomyopathy (HCM) gene panel comprising 82 nuclear DNA (nDNA) genes (8 sarcomere genes, 74 other HCM-associated genes) and mitochondrial DNA (mtDNA) genes. The authors confirmed that mitral leaflet size was significantly larger in patients with HCM than in controls. Moreover, significant and independent correlations were observed between mitral leaflet size and BSA, LV volume, LV mass by CMR, degree of MR and LAWS. No independent relationship of genetic factors with mitral leaflet size was observed.

The study is well designed and has an appropriate methodology. However, I have some questions regarding the genetic analysis:

1-DNA preparation- What was the quality of DNA?
2-Data analysis of the HCM gene panel-
   -What was the Q score?
   - Were pathogenetic variants retained if they were revealed to be damaging by at least one of prediction programs?
   -Were the variants validated by Sanger Sequencing?
3-Additional file 1 and file 2 are reversed.

Level of interest
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An article whose findings are important to those with closely related research interests
Quality of written English
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