Reviewer's report

Title: The rs1990760 polymorphism within the IFIH1 locus is not associated with Graves’ disease, Hashimoto’s thyroiditis and Addison’s disease

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Reviewer: Ajda Bicek

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General comment:
Penna- Martinez et al report a case-control association study of IFIH1 polymorphism with two autoimmune thyroid diseases (GD- Graves’ disease; HT-Hashimoto’s thyroiditis) and Addison’s disease (AD). Overall this manuscript is nicely written. The rationale and methods are well described. Authors conclude there is no significant role of IFIH1 polymorphism (rs1990760) in genetic susceptibility to GD, HT and AD.

Minor comments:
1) Penna- Martinez et al report on no significant differences comparing allele and genotype frequencies in patients and controls. They could not confirm association between endocrine autoimmune diseases and IFIH1 polymorphism as it was found in previous study (Sutherland et al., 2007). Authors report that IFIH1 distribution in controls was not different from previous published results (Sutherland et al., 2007).

Maybe they should mention comparison of their allele and genotype frequencies in patients with other published frequencies in patients in similar populations. Not only size of sample even change in allele frequency in patients could be the reason for lack of association.

2) Although they performed analysis of stratifying polymorphism rs1990760 IFIH1 for different parameters, they do not give the exact results. Even if results are not significant they would be appreciated.

It would be helpful to describe formation of subgroups for stratifying analysis and discuss how sample/subgroup size could affect analysis. For instance, when patients were divided into subgroups (strata) based on factors (gender, HLA marker and antibody production) that are thought to be related to development of disease, subgroups may became rather small in size to detect association with polymorphism (19 men with Hashimoto's thyroiditis and 51 men with Graves' disease further divided in two subgroups regarding the HLA marker?).

3) Authors should check cited link:
http://www.rfcgr.mrc.ac.uk/*fdudbrid/software/unphased/

4) Method of correction of p value in Tables 2 and 3 should be described.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.