Reviewer's report

Title: Interleukin-10 polymorphisms in Spanish IgA deficiency patients: a case-control and family study

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Reviewer: Dieter Kube

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IL-10 polymorphisms in Spanish IgA deficiency patients: a Case-control and family study by Ortiz et al.

This is a generally well-written manuscript presenting findings of high interest mainly for clinically and immunogenetically interested scientists. As the author stated IgA deficiency (IgAD) is the most common primary immunodeficiency in Caucasians, with most usual consequence of this disease is an increased susceptibility to infection. Therefore it is reasonable to analyse IL-10 gene variations. The presented study was aimed to perform a comprehensive association analysis of IL-10R and IL-10G microsatellites and IL-10 proximal promoter SNPs in a large Spanish sample of IgA deficiency patients.

278 patients with IgAD, but differing clinical presentation and 573 ethnically matched controls were for the microsatellites IL-10R and IL-10G and for three single nucleotide polymorphisms at positions -1082, -819 and -592 in the proximal promoter of the gene. However two other probably important SNPs at -2849, -3575 were not analysed. It is known that the genotype -2849AA is related to lower IL-10 in vitro production capacity, when compared to the other genotype. No association were obtained after respective Bonferoni corrections, probably reflecting the heterogeneous clinical presentation of the patients. The opportunity to analyse respective haplotypes from analysing samples within families improves the genetic base of these data. This has to be extended, also in view of the IL-10 production capacity.

I hope that all studies were performed with respective Institutional approvals of Bioethics in accordance to the Helsinki declaration.

There are some minor comments:
- it would be useful to describe the IL-10.G or IL-10.R alleles in terms of their numbers of CA-repeats as IL-10.G12 representing allele with probably 24CA, it is of interest, that analysing 573 healthy controls no shorter alleles for IL-10.G were identified (IL-10.G9) characterized by less than 19 CA-repeats, the same is intriguing for IL-10.R or is this absence associated with the 3% cut off? This is probably not correct.
- table 2 is somewhat misleading: either there are 100% or 200% of alleles to my understanding

If BMC is accepting negative association studies, this manuscript can be improved by extension of the familial and respectively haplotype analysis and after answering the minor comments rereviewed.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable
Statistical review: Yes

Declaration of competing interests:

I declare that I have no competing interests