Comment on Song et al.: associations between the major histocompatibility complex class I chain-related gene A transmembrane (MICA-TM) polymorphism and susceptibility to psoriasis and psoriatic arthritis: a meta-analysis

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To the Editor

We read with great interest the recent meta-analysis by the Song et al. on the associations between the major histocompatibility complex class I chain-related gene A transmembrane (MICA-TM) polymorphism and susceptibility to psoriasis and psoriatic arthritis (PsA) [1]. Their meta-analysis suggested a significant association of the MICA-TM A9 allele with psoriasis and PsA in the entire study population. In subgroup analyses, it revealed that the MICA-TM A9 allele was associated with PsA susceptibility in Europeans and psoriasis risk in Asians. The findings of this meta-analysis seem interesting; however, we would like to raise two concerns.

First, the relative small number of included subjects in their meta-analysis limits the statistical power to achieve a definitive conclusion. According to Table 2 of their paper, the total number of all study patients and controls was 2002 and 1933, respectively. When the subjects were subdivided into different ethnic groups, the sample number of each group was even small. In Europeans, the total number of included cases and controls was 617 and 633, respectively, whereas in Asians, the number was 1,288 and 1,050, respectively. Therefore, it seems unlikely that the meta-analysis draws a definitive conclusion with such a small number of subjects. Discussion for the influence of subject number on the final conclusion may be necessary.

Second, between-study heterogeneity was found among several analyses, which may result in bias for the estimates of the overall odds ratios (ORs). For example, heterogeneity was found among the analysis for the MICA-TM A9 allele association with psoriasis and PsA in all study subjects and Europeans ($P = 0.002$ and $P = 0.018$, respectively), and among the analysis for PsA in the entire population and Europeans ($P = 0.042$ and $P = 0.046$, respectively). It is noted that even in the analysis restricted to Europeans, heterogeneity appeared. Some possible sources, including study design, source of controls, mean age, percent of men, and genotyping method may account for it. It would be valuable if the authors could investigate sources of heterogeneity or give some discussion for this issue, rather than just conduct a combined analysis under a random-effects model.

Collectively, future investigations should be conducted using large sample numbers to establish a more definitive conclusion, especially in Europeans. If the above-mentioned remarks could be taken into account in their meta-analysis, a better analysis and explanation for the results may be achieved.

Conflict of interest None.

Reference

1. Song GG, Kim JH, Lee YH (2013) Associations between the major histocompatibility complex class I chain-related gene A transmembrane (MICA-TM) polymorphism and susceptibility to psoriasis and psoriatic arthritis: a meta-analysis. *Rheumatol Int*. In press

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