Response to: 'Diabetes mellitus in ankylosing spondylitis' by Lee and Song

We would like to thank Dr Lee and Dr Song for their correspondence to our preliminary study recently published in *Annals of the Rheumatic Diseases*.^{1,2} Dr Lee and Dr Song have raised some concerns. We make a response as follows. First, the non-ankylosing spondylitis group included persons without a diagnosis code of ankylosing spondylitis (based on International Classification of Diseases, Ninth Revision code, 720.0). The non-ankylosing spondylitis group was sex-matched and age-matched with the ankylosing spondylitis group. Second, this was only a preliminary analysis. Confounding variables were not included for adjustment. Dr Lee and Dr Song's good comments indicate a future research direction. Additional studies are required to include confounding variables which are associated with the risk of diabetes mellitus, such as unhealthy dietary pattern, decreased physical activity, high sedentary time, smoking and obesity.^{3,4} Third, we are not familiar with Mendelian randomisation. We do not have any comment why Mendelian randomisation can assess an observational association between a risk factor and an outcome. Fourth, we agree with Dr Lee and Dr Song that the statistical robustness of our preliminary study is low. The causal relationship between ankylosing spondylitis and diabetes mellitus has not yet been determined. We suggest that more robust real-world data, such as the Korean database, would of course be needed to clarify whether there is an association between ankylosing spondylitis and diabetes mellitus.

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