

Letters to the Editor

Insulin autoantibodies during the prediabetic period

Dear Sir,

In their article on insulin autoantibodies (IAA) during the prediabetic period, Dean and her colleagues [1] claim an association between IAA and islet cell antibodies (ICA) which they suggest is at variance with our own earlier findings [2]. However, our study was not one of prediabetes; rather it included one group with clinical diabetes and another of discordant twins from the London King's Study, many of whom, on account of their long duration of discordance, were very unlikely to develop diabetes. Dean et al. [1] quote a frequency of IAA positive individuals, but use a rank sum test to compare them, whereas we applied a frequency distribution test to our own data. Using the rank sum test, Dean finds a greatly increased probability of association between IAA and ICA when only CF-ICA positive subjects were analysed. We did not test our sera for complement fixation. However, CF-ICA are now recognised to represent selectively high titre ICA measured in a less sensitive system, so that although in practice "CF-ICA" may be a more accurate predictor of clinical diabetes, the analysis of Dean et al. [1] suggests that the degree or even presence of association between ICA and IAA is largely a matter of assay detection limit. The sensitivity of assays for ICA is known to vary widely between centres [3] and the same is likely to be true for IAA. Indeed, the relationship between ICA and IAA is far from settled [4–17]. The point is further emphasised by the clear lack of correlation in the data of Dean et al. [1] between ICA and IAA in ICA+ve, CF-ICA-ve individuals, i.e. between low titre ICA and IAA ($\chi^2 = 1.38$, $p > 0.1$).

Interstudy comparisons can only be drawn on the basis of comparable subjects and comparable methods; the current confusion over the association between IAA and ICA [4–17] almost certainly results from their heterogeneity. Part of the problem may be resolved if standard procedures for the measurement of ICA and IAA emerge from the International Workshops on Immunology and Diabetes currently in progress.

Yours faithfully,
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