

Copper chelation as a potential treatment for left-ventricular hypertrophy in type 2 diabetes

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To the Editor: We read with great interest the report by Cooper et al. [1] on unblinded treatment for left-ventricular hypertrophy in type 2 diabetes patients using triethylenetetramine for chelation of copper vs placebo. The results are very promising and certainly merit independent confirmation in larger double-blind, placebo-controlled trials. The authors should be commended for their detailed description of measurement of the primary endpoint of their study, left-ventricular mass by magnetic resonance imaging. However, the authors did not provide information on the way they measured serum copper or urinary copper excretion. Such information would be of interest for future trials and comparison of obtained results. It would also be of interest if the authors could discuss the seeming discrepancy between their conclusion that copper excretion fell to placebo levels after 12 months of treatment, while mean values shown in Fig. 2b of their article seem to plateau at approximately 6 times those of placebo after 10 and 12 months of treatment, with the difference at 10 months of treatment still highly significant. It seems that the non-significance of the *p* value at 12 months of treatment could be the consequence of loss of statistical power for comparison rather than of a decline in copper excretion between 10 and 12 months of treatment. In their report, the

authors state that during the last 6 months of the study, five patients discontinued triethylenetetramine and one patient discontinued placebo. To effectively judge statistical power at 10 vs 12 months of treatment, it would be important to know how many patients discontinued during the last 2 months of the study. This is important because the authors suggested that triethylenetetramine only leads to excretion of ‘excess’ copper, without threat of deficiency [1], while ongoing copper loss could lead to copper deficiency with risk of anaemia, pancytopenia and neurodegeneration [2, 3]. Another relevant point concerning the statistical analyses is that the copper values appeared to be highly skewed, in which case it would be more appropriate to report transformed values and use non-parametric statistics.

Duality of interest The authors declare that there is no duality of interest associated with this manuscript.

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