

Letter to Editor

Tight glycemic control and new modalities in the treatment of diabetes mellitus

Editor,

I read with interest the work of Nabila Abdella et al, Bulletin of KIMS 2002;1:11-17, entitled *Tight glycemic control and the new modalities in the treatment of diabetes mellitus*. This work demonstrates medicinal methods of achieving strict glycemic control, using the new insulin analogues, inhaled insulin, longer-acting oral antidiabetic agents, and the insulin sensitizers, the thiazolidinediones like rosiglitazone and pioglitazone. However, the role of other insulin sensitizers, particularly chromium, was overlooked.

Trivalent chromium is an essential nutrient naturally occurring in all living matter. It is required for normal glucose and lipid metabolism, and insufficient dietary chromium is associated with maturity onset diabetes and/or cardiovascular diseases.¹ Chromium supplementation has been shown to significantly ameliorate the hyperglycemia of diabetic animals fed chromium deficient diets.² Well controlled studies in human beings have demonstrated the beneficial effects of chromium supplementation on fasting glucose, glucose tolerance, blood lipids, insulin binding, and hypoglycemic blood glucose values and symptoms.³

Insulin resistance and hyperinsulinemia are independent risk factors for cardiovascular diseases. Chromium deficiency may contribute to insulin resistance, Type II diabetes mellitus, dyslipidemia and arteriosclerosis.⁴ Moreover, It has been shown that chromium supplementation could ameliorate diabetic micro- and macro-angiopathy—the single most important factor predisposing to morbidity and mortality in diabetes, probably through insulin potentiation by the supplemental chromium.⁵

It could thus be concluded that, being naturally occurring, chromium would be superior

to the thiazolidinediones due to the simple fact that any manufactured drug may induce simple or troublesome side effects or cross reactions. Equally true is that the latter may induce tolerance, which necessitates dosage increase as time goes by. It would, therefore, be advisable to use chromium before resorting to drugs.

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References

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Authors' reply

The letter on the role of chromium in insulin sensitization gives an interesting point of view though there is no recommendation to the use of chromium by institutions such as the American Diabetes Association.

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