Abstract

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Glucose tolerance in subclinical pyridoxine deficiency in man.

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OBJECTIVE AND METHODS: Oral glucose tolerance tests were carried out in 16 clinically normal subjects with pyridoxine deficiency (as adjusted by red cell transaminase activity and the 6h tryptophan load test), and in 16 nondeficient controls.

RESULTS: The deficient subjects had fasting normoglycemia with hypoinsulinemia (p less than 0.01), and a normal postglucose increment in insulin, but peak blood glucose and incremental glucose area were both significantly lower than in the controls (p less than 0.01). Suppression of growth hormone during the glucose tolerance test was similar in both groups. These data are interpreted as indicating an enhanced sensitivity to the hypoglycemic action of insulin in pyridoxine-deficient individuals. Supplementation with pyridoxine in these subjects resulted in a tendency for insulin levels to rise (NS), and a significant increase in growth hormone levels.

CONCLUSION: Impairment of growth hormone reserve may be the basis for the increased insulin sensitivity. Subclinical pyridoxine deficiency of the degree seen in this study is apparently associated with improved, rather than impaired, glucose tolerance.

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