Summary. 1) Less than 15% of copper in crude bovine cerebrocuprein I (Cu content 0.15%) and in fraction I copper proteins from normal human brain reacted directly with sodium diethyldithiocarbamate. 2) In brains from 2 cases of hepatolenticular degeneration 29 to 45% of the fraction I copper reacted directly. This direct-reacting copper, amounting to more than 7.5 μg/g fresh tissue *i.e.* more than 20-fold the amount of direct-reacting copper in normal human fraction I, may represent copper bound to brain proteins which are normally copper-free.

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Effect of Tolbutamide on Serum Cholesterol Levels in Hypercholesterolemic Patients.* (24016)

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On the basis of the mild abnormality in glucose tolerance in most patients with idiopathic hypercholesterolemia, the suggestion has been made that these patients have an abnormality of their energy metabolism that resembles diabetes(1). Because of this, a trial of tolbutamide has been carried out to determine what effect, if any, such treatment would have on the elevated serum cholesterol levels. Eight patients were studied. Control periods of one to 24 months were available, since these patients were selected from a larger group being studied because of hypercholesterolemia. Total serum cholesterols ranged between 300 and 500 mg/100 ml. Tolbutamide administration was begun with 3 g the first day, 2 g the second day and 1 g daily thereafter for 2 months. A diet containing approximately 50 g fat/day was constant throughout control and experimental periods. The patients' weight did not fluctuate more than 2 pounds above or below that at beginning of the experimental period. Total and esterified serum cholesterol determinations were made after one week of treatment and at one or 2-week intervals thereafter.

Results. In 5 of the 8 patients a drop in serum cholesterol levels occurred after one week. In one instance this decrease amounted to 100 mg/100 ml of serum and in the others was approximately 50 mg. In 3 patients there was no change from the control period. After the first week there was a slight rise above control values in 5 patients, and no change in the other 3. All patients that showed a decrease after the first week returned to control value or higher by the second or third week and then cholesterol concentration fluctuated at or above control levels until the end of the 2-month period. In no patient was the serum cholesterol lowered below control levels during the second month of tolbutamide therapy.

Conclusions. Tolbutamide administered to hypercholesterolemic patients in doses of 1 g daily did not result in lowering of serum cholesterol concentrations although temporary reductions occurred in 5 of 8 patients during the first week of drug administration.

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