Rapid Restoration Of Normoglycaemia Using Intravenous Insulin Boluses

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Summary: The reduction of elevated fasting plasma glucose levels to near normal by repeated intravenous bolus insulin doses, given according to a simple algorithm, has been studied in 17 Type I and 23 Type II, healthy diabetic patients. Using a formula based on the patient's plasma glucose, height and body-weight with insulin boluses given every 30 min if the plasma glucose remained above 6 mmol/l, plasma glucose levels were reduced to less than 7.5 mmol/l in 28 (70%) patients by 60 min at which time the mean (± 1 SD) plasma glucose level in the Type I diabetic patients had reduced from 18.2±4.9 to 8.9±3.5 mmol/l and in the Type II diabetic patients from 12.3±3.1 to 5.9±1.4 mmol/l. None of the patients had symptomatic hypoglycaemia although in one Type I patient the plasma glucose level fell to 2.2 mmol/l. The rate of fall of glucose in the less insulin sensitive patients was not increased by giving more insulin. The regimen allows a reproducible and prompt glycaemic reduction in fasting diabetic patients.