SUB CUTANEOUS INSULIN PULSE THERAPY (SIPT)

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SIPT consists of administration of small doses of regular insulin hourly or two hourly in the sub cutaneous tissue of anterior abdominal wall through a scalp vein needle. Eight NIDDM subjects, 5 males and 3 females, age ranging from 40 to 72 years (Mean 59 ±9.83 Yrs.) with mean duration of diabetes 13.88 ± 10.2 Yrs., Were admitted for elective surgery. Glycemic control was attempted preoperatively with multiple pre meal doses of Actrapid MC with a single injection of Monotard MC at bed time. The mean fasting blood sugar in the eight subjects with this insulin regimen was 305.25 ± 90.45 mg% and the mean insulin requirement per day was 48.13 ± 12.79 units. The subjects were put on SIPT for 48 to 72 hours. During SIPT the mean fasting blood sugar dropped to 140 ± 53.78 mg% and this marked decline in fasting blood sugar value was statistically significant ($P<0.001$). The mean insulin requirement during SIPT was 49.38 ± 20.04 units, similar to the previous regimen (NS). The subjects were switched back to conventional insulin therapy after SIPT during which period the mean fasting blood sugar was 164.88 ± 49.84 mg% and this value was again significantly lower than the pre SIPT fasting blood sugar value ($P<.001$). Surprisingly the mean insulin requirement during conventional insulin therapy after SIPT, was reduced to 35.38 ± 10.81 units and this was significantly lower than the initial dose and also subsequently in SIPT ($P<.05$). Thus it is observed that SIPT ensures glycemic control in uncontrolled diabetic subjects and also results in a decline in the insulin requirement on reinstitution of conventional insulin therapy.

December, 1988