

Intensive diabetes therapy did not adversely affect quality of life

The Diabetes Control and Complications Trial Research Group. Influence of intensive diabetes treatment on quality-of-life outcomes in the Diabetes Control and Complications Trial. Diabetes Care. 1996 Mar;19:195-203.

Objective

To assess the effect of intensive insulin therapy on the quality of life of patients with insulin-dependent diabetes mellitus (IDDM).

Design

Randomized controlled trial with mean 6.5-year follow-up (range 3 to 9 y).

Setting

29 centers in North America.

Patients

1441 patients aged 13 to 39 years (mean age 27 y, 53% men) who had IDDM for 1 to 5 years with no microvascular complications (primary prevention cohort) or for 1 to 15 years with mild to moderate complications (secondary intervention cohort). Follow-up was 99%.

Intervention

Patients were stratified by cohort and center and allocated to intensive therapy ($n = 711$) or to conventional

therapy ($n = 730$). Intensive therapy consisted of ≥ 3 insulin injections/d or treatment with an insulin pump, with dosage adjustment guided by blood glucose monitoring done ≥ 4 times/d, close attention to the effects of diet and exercise on blood glucose level, monthly clinic visits, and frequent telephone contact. Conventional therapy consisted of 1 to 2 insulin injections/d, daily blood or urine glucose monitoring, dietary instruction, and quarterly clinic visits.

Main outcome measures

Quality of life was assessed by the Diabetes Quality of Life Measure (DQOL), which assessed satisfaction with and effect of disease management as well as worry about diabetes and social or vocational worry; it had a score of 0 to 100 for satisfaction. The Symptom Checklist-90R (SCL-90R) assessed psychiatric symptoms (average score = 50). The Medical Outcome Study 36-Item Short Form Survey (SF-36) assessed functional status (score up to 100) and was administered only at study end.

Main results

The DQOL and SCL-90R scores did not differ at baseline and study end for

either group. Mean total DQOL baseline and study end scores for patients who received intensive therapy were 78 (SD 8) and 78 (SD 9), respectively, and scores for patients who received conventional therapy were 78 (SD 9) and 78 (SD 9), respectively. The groups did not differ in any aspect of functional status (SF-36 scales) at study end. In patients who received intensive therapy, a history of hypoglycemic coma or seizure was associated with psychiatric symptoms ($P = 0.008$).

Conclusion

The quality of life of patients with insulin-dependent diabetes mellitus was not adversely affected by intensive insulin therapy.

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Commentary

Here we have yet another positive outcome from the ubiquitous Diabetes Control and Complications Trial (DCCT). The patients who were randomized to receive "intensive" management had statistically similar scores on a highly valid and reliable quality-of-life measure when compared with patients who received conventional therapy. The results clearly suggest that no additional emotional or physical burdens are placed on those with IDDM who take the added responsibilities of self-care required for intensive glycemic control.

This analysis provides an additional compelling message to both patients with IDDM and their physicians not to hesitate further in attempting to achieve the "tight" targets outlined by the American Diabetes Association (i.e., glycated hemoglobin values consistently less than 7%).

The emerging consensus is that the same targets of glycemic control achieved in the DCCT should also be applied to patients with non-insulin-dependent diabetes mellitus (NIDDM). Whether such lofty goals can be realized remains to be seen. The patients studied in the DCCT were younger and more educated than the average patient with diabetes. According to the 1989 National Health Interview Survey (1), 90% of all patients with diabetes have NIDDM, most have not completed high school, and their median age is twice that of patients with IDDM. Many already have greater activity limitations at diagnosis than do those with IDDM. Only 12% take insulin on a regular basis, and even fewer monitor their blood glucose daily. Obesity is the rule rather than the exception in this difficult-to-manage population.

The challenge facing physicians will be to dramatically change the "usual" style of care

for all persons with diabetes, regardless of type. Those in practice worry about the extra burdens that such a change will place on both them and their patients. But in this era of disease management, patient satisfaction, and cost-containment, the potential rewards of lowering the incidence of neuropathy, end-stage renal disease, and blinding ophthalmopathy are now too great to ignore.

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Reference

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