Health-related quality of life of type 2 diabetics in German primary care: Results of the DETECT study

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Abstract

OBJECTIVES: To describe the health-related quality of life (QoL) of type 2 diabetics by age group, duration of diabetes, comorbidities and current therapeutic interventions and HbA1c status. METHODS: DETECT (Diabetes Cardiovascular Risk Evaluation, Targets and Essential Data for Commitment of Treatment; http://www.detect-studie.de) is a large-scale, nationally representative, cross-sectional clinical-epidemiological study with a prospective longitudinal component in primary care. Based on a randomised sample of 3,188 physicians, the study sample of 10,519 patients was assessed in a standardised way in 2003. Frequency of problems in the EQ-5D items mobility, self-care, usual activity, pain/discomfort and anxiety/depression as well as the additive total score were analysed in n=6,558 type 2 diabetics. RESULTS: The most frequent QoL restrictions were in the domains of pain/discomfort (74.1%), mobility (44.3%), daily activities (34.1%), anxiety/depression (31.4%) and self-care (17.2%). The mean additive total score was 68.1. That was, after adjustment for age, gender, significantly lower than in nondiabetics (72.4%) or in healthy attendees (81.7). Overall and in each QoL domain problems increased with micro- and macrovascular disease was present, and with the age of patients or duration of diabetes respectively. There was no significant differences between patients with or without therapy (diet, exercise and or antidiabetics). However, patients with insulin and combined therapy had considerably lower QoL scores, even after adjustment for age, gender, duration of diabetes and presence of micro- and macrovascular disease. HbA1c adjustment had only small effects on the EQ-5D dimensions. Compared to patients with optimal HbA1c values (< 8%), poorly adjusted patients (HbA1c > 8%) reported significantly more problems at the dimensions mobility and self-care. CONCLUSIONS: Our data provide, in undisputed detail, the health related QoL of type 2 diabetics in German primary care, highlighting the association of insulin and combined treatments with reduced QoL.

Background

The prevalence of diabetes mellitus is reaching epidemic proportions in many parts of the world. In Germany, diabetes afflicts 7% of the general population1 and 15.3% of primary care patients2 €14.6 billion is spent on diabetes-excess-costs in Germany alone. In addition, diabetes represents an everyday challenge for patients (e.g. blood sugar control and insulin intake). Quality of life can be characterized as the goal of all health interventions and is often used as a short-term outcome measure in clinical trials3.

Objectives

To describe the health-related quality of life (QoL) of type 2 diabetics:
- (1) in comparison to nondiabetics
- (2) by age groups
- (3) by duration of disease
- (4) by micro- and macrovascular disease

Methods

- Data were from the cross-sectional part of the DETECT-study (2003)4
- Definition of type 2 diabetes based on the doctors’ clinical diagnosis
- Quality of life assessment resulted from the EQ-5D (German Version of the EuroQol Questionnaire)
- Microvascular disease: retinopathy, nephropathy, neuropathy, diabetic foot
- Macrovascular disease: coronary artery disease, cerebrovascular disease, peripheral arterial disease
- HbA1c values were taken from the patient record

Results

(1) Type 2 diabetes reported more problems in all five EQ-5D domains and had a lower additive total QoL score (68.1) than nondiabetics (72.4) and patients without chronic disease (61.7). Most problems were reported in the domains pain/discomfort (44.3%) and daily activities (34.1%), anxiety/depression (31.4%) and self-care (17.2%).
(2) Problems in all domains increased with age and duration of disease.

(4) Compared to type 2 diabetics without vascular comorbidities patients with microvascular as well as with macrovascular comorbidities reported significantly more problems in all EQ-5D domains. Diabetics with both, micro- and macrovascular disease had the lowest score (58.8). (5) HbA1c adjustment had nearly no influence on the patient reported QoL. Insufficient adjusted patients (HbA1c > 8) differed from optimal adjusted diabetics (HbA1c < 6) only in the domains mobility and self care as well as in the total score. (6) There were no significant differences in the EQ-5D scores between patients with oral antidiabetic therapy, patients who received no therapy or only diet and exercise interventions. Compared to diabetics without any therapy, patients with combined therapy (oral antidiabetes + insulin) reported more problems in the self care domain. However, patients with insulin therapy had considerably lower QoL scores (except for anxiety), even after adjustment for age, gender, duration of diabetes, HbA1c adjustment and presence of micro- and macro-vascular disease.

Conclusions

Our data show in unprecedented detail the health-related QoL of type 2 diabetes in German primary care. These data highlight the fact that insulin therapy is associated with reduced QoL scores. Despite the potential benefits of insulin on hyperglycemia and vascular complications, the complex application carries the risk of hypoglycemia and weight gain. These are potential mediators for reduced QoL scores.

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References:

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