Alexithymia in Type I and Type II Diabetes

Markus Stingl1*, Katrin Naundorf2, Lisa vom Felde1, Bernd Hanewald1

1Center for Psychiatry and Psychotherapy, Justus-Liebig-Universitaet Giessen
2Kerckhoff-Klinik GmbH, Psychocardiology, Benekestr. 2-8, 61231 Bad Nauheim, Germany
*Corresponding author: M Stingl, Center for Psychiatry and Psychotherapy, University Hospital Giessen and Marburg, Giessen site, Klinikstr. 36, 35385 Giessen, Germany

Submission: February 09, 2018; Published: April 02, 2018

Abstract

Objective: The course of the diabetes is significantly determined by individual behavior. In addition to disease-specific knowledge, self-care and adequate responses to emotional needs seem to be vital for a sufficient glycemic control.

Method: We examined the emotional impairments in 121 type I and type II diabetics by measuring their extent of alexithymic characteristics via the Toronto-Alexithymia-Scale (TAS-26).

Results: Both diabetic patients (type I and type II) showed significant more difficulties in identifying and verbalizing emotions than the norm sample, but a lower external-oriented thinking style. In this context, we found no differences between type I and type II diabetics. The implications of these findings for the diabetes care are discussed.

Introduction

In addition to organic reasons, psychological factors seem to play a crucial role in causing and amplifying diabetes. Several studies found a substantial correlation of psychosocial factors with diabetes, e.g. critical life events with diabetes type I [1] posttraumatic stress disorder [2] or depression in type II diabetes [3,4]. Furthermore, receiving the diagnosis of diabetes itself can be a critical life event with dramatic character and cause psychological disturbances or adjustment disorders [5]. Subsequently rejecting and denying the diabetes disease can worsen medical compliance. Failure to keep a diet, not taking medication or omitting the insulin substitution can lead to a metabolic imbalance and increase the risk for complications later on [6,7]. These physical negative long-term consequences can reduce a person’s quality of life and mental health by inducing or maintaining depression or fear [8,9]. Especially abnormally high fear of hypoglycaemia is prominent in diabetic patients, who by constantly trying to avoid possible hypoglycaemic states suffer the consequences of excessive elevated blood sugar values. These patients also often mistake the physical symptoms of fear with symptoms of hypoglycaemia [10,11].

The treatment of diabetes mellitus requires high patient compliance. Crucial for the long-term outcome is the fact that poorly controlled diabetes initially causes only a few complaints but manifests clinically with a latency of several years or even decades. These late effects such as micro- and macroangiopathy, nephropathy, retinopathy, neuropathy or diabetic foot are then often severe and irreversible. Mental illnesses can affect compliance and the ability to adequately anticipate long-term consequences [12]. The impact of psychological factors becomes particularly clear with the phenomenon of “Brittle diabetes”, which is characterized by an instable insulin-dependent diabetes with frequently changing states of hyper- or hypoglycaemia without sufficient medical explanations for these fluctuations. Several psychotherapeutic studies showed that unconscious conflicts impair the affect regulation, and as a result the blood glucose regulation of patients with brittle diabetes [12-14]. These psychological findings are in line with psychophysiological approaches, which explain the impact of psychic self-regulation on the blood glucose regulation through stress hormones like cortisol or catecholamines, which energize the organism and therefore increase the blood glucose level [15].

From a clinical point of view to face emotional difficulties in patients, the construct of alexithymia (a=non, lexis=reading, thymos=feeling) describes an emotional impairment in identifying and verbalizing feelings and an accompanying externally oriented, fact-based way of thinking [16,17]. Alexithymia is considered to be a factor enhancing the vulnerability to different physiological and psychological illnesses [18]. For instance, different studies have shown increased prevalence rates of high alexithymic characteristics in persons with eating disorders [19,20], depression [21], hypertension [22], ulcerating colitis / Crohn’s disease [23], asthma [24] and rheumatoid arthritis [25].

However, research focusing on alexithymia in diabetes yielded different results so far. While Damak et al. [26] found no increased alexithymic features in type II diabetics, Friedmann et al. [27] reported slightly higher alexithymia charateristics in insulin-
dependent diabetics of both types. A study by Manfrini et al. [28]
showed increased alexithymia in nearly half of the examined type I
diabetics and Sapozhnikowa et al. [29] found a similar prevalence
for alexithymia in type II diabetics. An examination of patients
suffering from a metabolic syndrome found increased alexithymic
characteristics and identified alexithymia as an aggravating factor
for the exacerbation of metabolic symptoms [30]. High
alexithymic characteristics were also found in diabetes patients
with terminal renal failure and bulimia [31]. Regarding blood
glucose measurement and management, Housiaux et al. [32] found
an association with alexithymia in type I diabetic children. Also,
Luminet et al. [33] observed a predictive correlation of alexithymia
and blood glucose self-measurement within an 8-week trial.

Based on these findings going beyond physiological aspects
causing diabetes, we focussed on emotional differentiation
impairments in diabetic patients. As studies up-to-date examined
only alexithymia in one type of diabetes, the aim of our study
was to contrast and differentiate possible emotional limitations
between type I and type II diabetics by measuring their degrees of
alexithymia.

Method

We surveyed 121 patients, comprising type I (N=44; 36.4%)
and type II (N=77; 63.6%) diabetics who participated in a diabetes
training program by administering the Toronto-Alexithymia-
Scale-26 (TAS-26). The TAS-26 is a self-rating instrument to assess
the alexithymic core characteristics on three subscales: “difficulties
in identifying feelings”, “difficulties in verbalizing feelings”, and an
“externally-oriented thinking style” [34]. The survey comprises
26 items with 5-step rating scales and is a validated adaption of
the international recognized Toronto-Alexithymia-Scale-20 [35]
Cronbach’s alpha: 0.67-0.84). For the statistical comparisons we
contrasted the sample mean values with the norm sample via t-test
(α=.005).

There was no significant gender difference between the two
subgroups of type I and type II diabetics (χ2(df=2; n=121)=0.416;
p=.812).

Results

The degree of alexithymic characteristics in diabetic patients
was higher compared to the normal population (Meandiff=0.15,
p=0.007, T=2.76, df=112). Concerning the subscales, diabetic
patients on average reported significantly more difficulties in
identifying their feelings (p<0.001, T=6.17, df=112) and slightly
more difficulties in finding words for their feelings (p=0.076,
T=1.79, df=112). On the other hand, the patients showed a less
externally-oriented thinking style than the normal population
(p=0.001, T=3.327, df=112) (Figure 1).

Contrasting the two sub groups (type I and II) of diabetic
patients, we found no group differences in their global degree of
alexithymia (p=0.836, T=0.207, df=79.4) nor in the subscales.

Discussion

The surveyed diabetic patients reported significantly higher
alexithymia scores measured by the TAS-26 than the normal
population. This is in line with findings in other chronic diseases
e.g. hypertension, ulcerating colitis, Crohn’s disease, asthma
and rheumatoid arthritis), where patients also showed more
pronounced alexithymic characteristics. The diabetic patients
reported remarkable difficulties in identifying and verbalizing their
emotions, which can impede their ability to adequately regulate
emotional states, e.g. addressing their personal sensitivities in
interpersonal conflicts. These emotional impairments are eminently
problematic in diabetic patients because of the well known impact
of emotional burden or ongoing stress on blood glucose regulation.
Studies observed increased blood glucose concentrations following
stressful situations [36,37] or heightened HbA1c-values in diabetics
exposed to chronic stress [38,39] highlighting the importance of
stress regulation techniques to cope with the accompanied increase
of the physiological blood glucose level.

Furthermore, appropriate experiences of one’s bodily states
are commonly embedded in an emotional context. Diabetics with
high alexithymic characteristics, however, may have difficulty being
aware and perceiving these sensations in order to adjust their
necessary insulin dosage.

However, the observation of lower values on subscale 3
(“externally-oriented thinking”) in diabetics compared to the
normal population is striking. Valera et al. [40] assume that a
genetically determined alexithymia phenomenologically appears
mostly on this scale, as their studies in monzygotic twins suggested.
Conversely, this could mean that the observed alexithymic pattern
in this study (high impairments in identifying and verbalizing
feelings without an accentuated external thinking style) is acquired
instead of congenital [40,41]. Following this line of reasoning, it is
possible that the alexithymic features resulted from dysfunctional
coping strategies, which again can have a negative impact on the
course of the diabetic disease.
Having these results in mind, the question arises if the treatment and training measures for diabetic patients have to be expanded. Some case studies reported positive effects of emotion focussed psychotherapy in patients with Brittle diabetes on their self-care [13,14]. The latter is crucial for an adequate diabetes management to prevent late sequelae. By treating alexithymic patients suffering from other chronic diseases with emotion focussed elements like fostering the perception of bodily sensations and concomitant feelings, these therapy studies obtained promising results [42,43]. Additionally, because alexithymic people do not seem to have deficits in their imagination abilities, alexithymic diabetic patients could potentially benefit from relaxation or imagination techniques to learn and improve regulating their emotional states [44,45].

Usually, diabetic education programmes focus on knowledge transfer about the disease and its management on a “technical” level [46]. Our findings of impaired emotional abilities in diabetics suggest an additional focus on these impairments within the training of diabetic patients, promoting treatment concepts, e.g. the psychosocial PRO-measures [47] going beyond glycemic control in diabetic patients.

**Limitations**

First, despite its international widespread use, the Toronto-Alexithymia-Scale is a self-report instrument and therefore evaluates the subjective judgements of the participants requiring knowledge about their own impairments. Second, we did not control for duration of the diabetic disease nor the number and severity of comorbidities. Finally, the proportion of type I and type II diabetic patients in the study sample was higher than the proportion in the normal population. Therefore, our results need to be interpreted having these limitations in mind.

**References**


