

Changes of Metabolic Parameters in Participants of a Structured T2DM Education Program (KOMEKON)

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Introduction

Since 2011 the PizolCare managed care network is delivering an education program to patients with recently diagnosed type-2-diabetes mellitus (T2DM) in a rural, partly urban type settlement region of Eastern Switzerland. This program called KOMEKON consists of 12 hours of practical group education and – for reasons of sustainability – consecutive refresher courses three times per year. We assessed the metabolic parameters in participants one year after they attended KOMEKON.

Methods

After obtaining informed consent from 100 participants, we asked their GP's to report the current values for FBG, HbA_{1c}, body weight, blood pressure, LDL and HDL cholesterol one year after attending KOMEKON. The response rate was 70%. We then performed a statistical analysis using MS Excel for Mac version 15.33 and the Omni Calculator (www.omnicalculator.com) to compare the different parameters before and one year after KOMEKON.

Results

The baseline characteristics are described in table 1. Mean FBG levels and HbA_{1c} changed from 9.7mmol/l to 7.3mmol/l (CI 95%: 1.02, 0.54; p = 0.0007), and from 8.1% to 6.6% (CI 95%: 0.40, 0.14; p < 0.0001), respectively. The mean BMI initially amounted to 32.0kg/m². One year after KOMEKON it was 31.5kg/m² (CI 95%: 1.14, 1.44; p = 0.53, ns). Mean blood pressure changed from 137/83 to 136/80 mmHg (CI 95% for diastolic BP: 1.6, 2.1; p = 0.03). Mean HDL and LDL levels were at 1.3mmol/l and 3.0mmol/l before KOMEKON. One year after, they remained unchanged at 1.3mmol/l, 2.9mmol/l (p > 0.05, ns), respectively.

Conclusion

Participants of a structured educational program for recently diagnosed T2DM showed significant improvement of FBG levels and HbA_{1c} after one year. However, HDL and LDL cholesterol were unaffected. In conclusion participants of the KOMEKON education program showed favorable changes in FBG and HbA_{1c} after one year.

Abbreviations

KOMEKON = KOMPLETE MEtabolische KONtrolle

T2DM = Type-2-Diabetes Mellitus

FBG = Fasting Blood Glucose

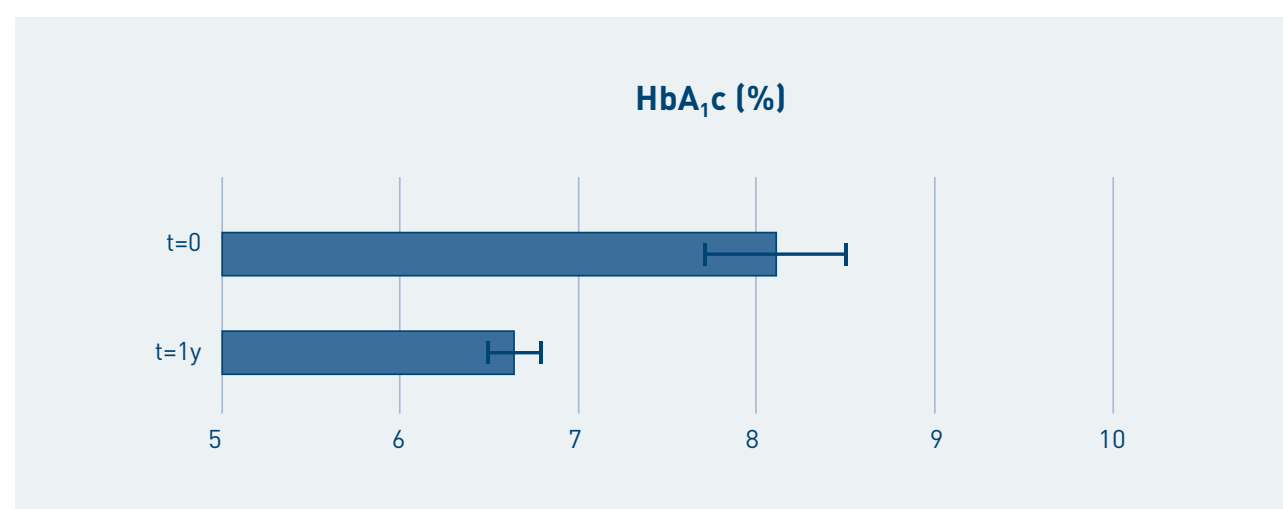
BMI = Body Mass Index

DBP = Diastolic Blood Pressure

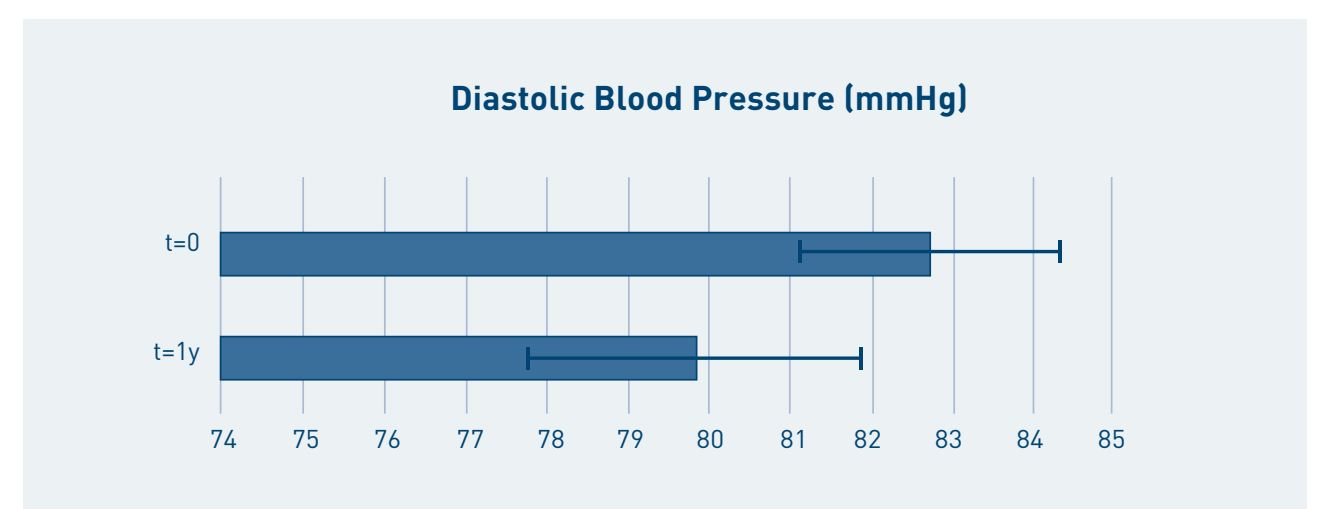
SBP = Systolic Blood Pressure

Patients (f 62, m 38)	100
Age (y)	61
Diabetes Duration (y)	3.5
BMI (kg/m ²)	32
BP syst (mmHg)	137
BP diast (mmHg)	83
HbA _{1c} (%)	8.1
Fasting Glucose (mmol/l)	9.7
LDL Cholesterol (mmol/l)	3
HDL Cholesterol (mmol/l)	1.3

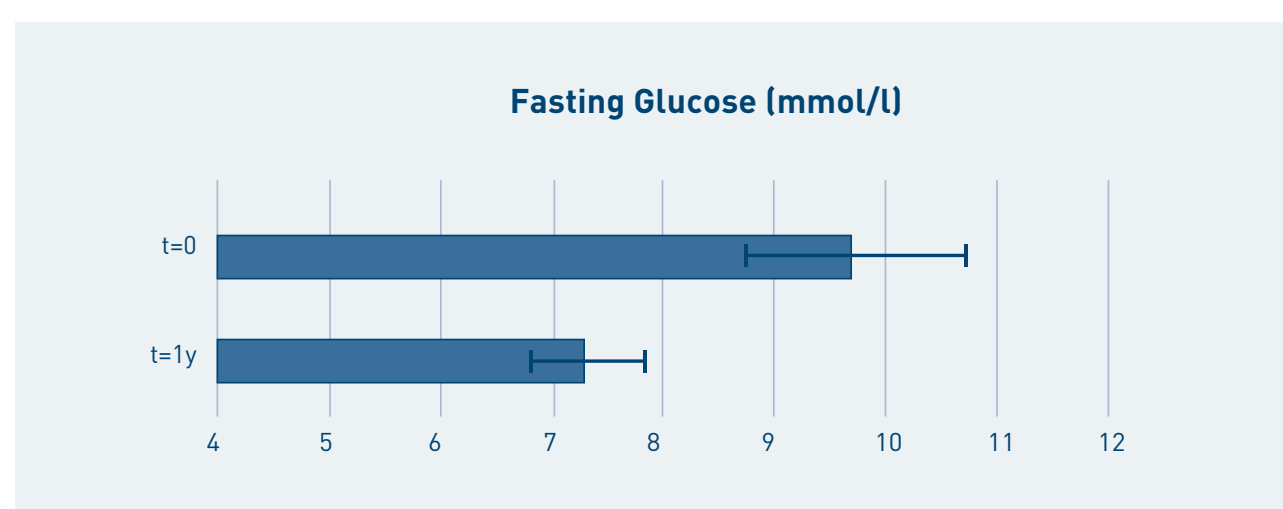
Table 1: Baseline characteristics.



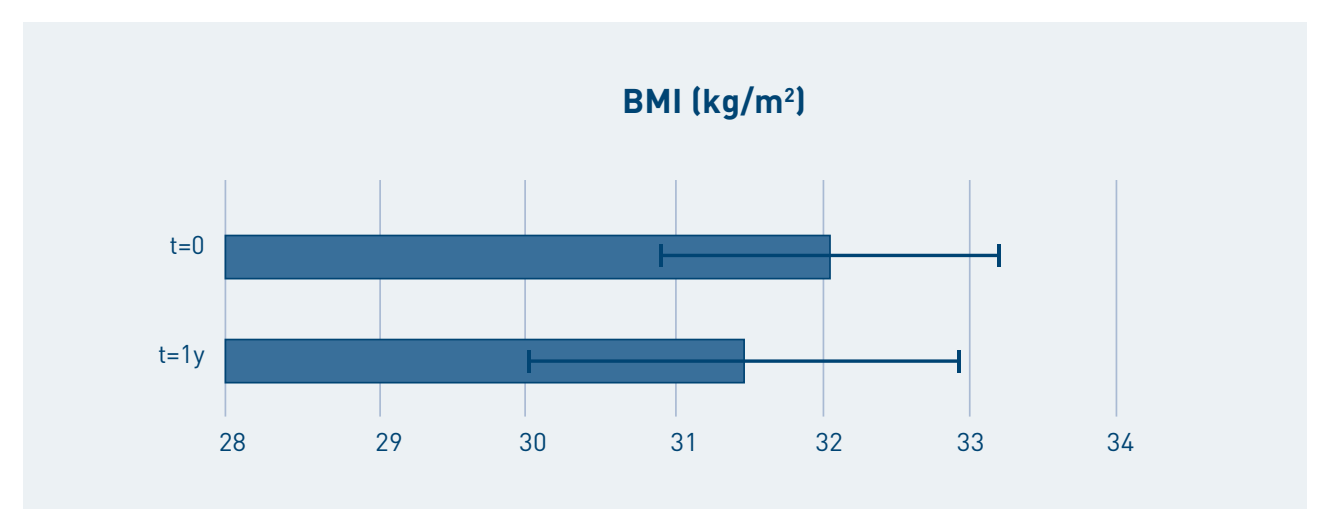
Graph 2: Changes in HbA_{1c}.



Graph 4: Changes in DBP.



Graph 3: Fasting Blood Glucose.



Graph 5: Changes in BMI.