

CroDiab NET as a powerful tool for tracking cardiovascular risk factors in diabetic patients: data from Bjelovar-Bilogora County collected during the period from 2001 to 2012

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Abstract

Diabetes mellitus (DM) and its chronic complications are the major world health problem having an upward trend in the whole world. It is believed that currently 366 millions of people suffer from DM worldwide, and by the year 2030 the number of diabetics will increase to 552 million. The number of patients with DM rises in all countries, and 80% of the world's population suffering from diabetes live in developing countries or newly industrialized countries [1].

The Republic of Croatia and the Bjelovar-Bilogora County are not exempt from this trend and the prevalence of DM in Croatia is 6.1% [2]. The influx of patients in the Center for Diabetes of the Bjelovar-Bilogora County is rising. The values of body mass index (BMI), Hba1c levels and the incidence of hypertension and dyslipidemia are worrisome. Therefore the incidence of modifiable cardiovascular risk factors increases too. Cardiovascular complications are the leading cause of morbidity and mortality among patients with DM, and the risk of coronary artery disease is 2-4 times higher than in the general population [3].

This study has involved 4,408 outpatients whose e-records are maintained by the national register of diabetic persons. CroDiab NET, a computer software designed on the basis of world quality indicators, integrates electronic patient records and generates discharge summaries parallel to collecting data for the national diabetes registry [4]. Type 2 diabetes was recorded in 93% of patients, while type 1 diabetes was recorded in only 3% of patients. Hypertension was present in 51% of patients with upward trend in the last three years. The highest rate of dyslipidemia was 39% in 2004, with downward trend at about 25% in the last 3 years. The frequency of patients with myocardial infarction was stable at around 10%, with the lowest value of 7.4% in 2010. The prevalence of patients with stroke also showed a downward trend from 14.9% to 7.4%. Only 10% of patients had BMI <25 kg/m², while 32% of them were overweight persons with BMI from 25 to 30 kg/m², and 50% were obese persons with BMI >30 kg/m². Good disease control was achieved by only 18% of patients, a further 18% of them had borderline disease control.

The level of regulation of diabetes, BMI, as well as other observed modifiable cardiovascular disease risk factors (arterial hypertension, dyslipidemia) is not satisfactory. Therefore further efforts for better glycemic control, control of hypertension, and dyslipidaemia are needed. CroDiab NET is a powerful tool for tracking cardiovascular risk factors in diabetic patients.

Keywords

Diabetes mellitus • Cardiovascular risk factors • Cardiovascular complications • Body mass index • Glycated hemoglobin • Hypertension

Literature

1. IDF Diabetes atlas. Fifth edition. <http://www.idf.org/diabetesatlas> (8.5.2013).
2. Metelko Z, Pavlic-Renar I, Poljicanin T, Szirovitza L, Turek S. Prevalence of diabetes mellitus in Croatia. *Diabetes Res Clin Pract.* 2008;81(2):263-7.
3. Li YW, Aronow WS. Diabetes mellitus and cardiovascular disease. *J Clinic Experiment Cardiol.* 2011;2:114.
4. CroDiab NET. http://www.idb.hr/web_english/crodiabnet.htm (10.1.2014).