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25th European Congress of Endocrinology 2023

European Society of Endocrinology

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P641**Cancer, cardiovascular disease and all-cause mortality in Iraqi- and Swedish-born individuals in Sweden - the MEDIM cohort study**Nadine Fadhel Dhaher^{1,2,3}, Miriam Pikkemaat⁴, Nael Shaat^{2,3}, Anton Nilsson⁵ & Louise Bennet^{6,7}¹Trelleborg Hospital, Department of Medicine, Trelleborg, Sweden; ²Lund University, Genomics, Diabetes and Endocrinology, Department of Clinical Sciences, Malmö, Sweden; ³Skåne University Hospital, Department of Endocrinology, Malmö, Sweden; ⁴Lund University, Center for Primary Health Care Research, Department of Clinical Sciences Malmö, Malmö, Sweden; ⁵Lund University, Department of Laboratory Medicine, Lund, Sweden; ⁶Lund University, Department of Clinical Sciences in Malmö, Malmö, Sweden; ⁷Lund University Hospital, Clinical Research and Trial Center, Lund, Sweden**Background**

Immigrants from the Middle East to Sweden have a twice as high prevalence of type 2 diabetes (T2D) and obesity as native-born Swedes. Both obesity and T2D have been linked to increased incidence of cancer, cardiovascular disease (CVD) and all-cause mortality (ACM); however, data on differences between ethnicities are scarce.

Aims

In a population-based cohort we aimed to study the impact of Middle Eastern and European ethnicity on ACM, cancer- and CVD related mortality, incidence of cancer and CVD in an eight-year follow-up study. Methods: People born in Iraq or Sweden, who were 30-75 years of age, were invited from 2010-2012 to participate in the population based MEDIM study. A total of 1398 Iraqi- and 757 Swedish-born residents participated in the study, which consisted of a health exam, fasting blood sampling, assessment of insulin secretion and action (through oral glucose tolerance test) and questionnaires assessing history of CVD, cancer and T2D. Register data were retrieved until the 31st of December 2018 from the Swedish National Patient Register and Cause of Death register regarding CVD diagnosis, cancer diagnosis and cause of death. Information regarding diabetes (DM) diagnosis was retrieved from the National Diabetes Register. Individuals with a history of cancer or CVD at baseline were excluded. Cox regression analysis was assessed to study the adjusted hazard ratios (HR) for the relationships between ethnicity and ACM, cancer events, CVD events, death from cancer, and death from CVD, with adjustments for age, sex, anthropometrical measures, DM, and lifestyle.

Results

The HR for ACM was 0.35 (95% CI .14-.86) (p<0.05) were observed for CVD related morbidity and mortality between Iraqi- and Swedish-born.

Conclusion

In this 8-year follow-up study, our data show that despite the high burden of cardiovascular (CV) risk factors and T2D, ACM, cancer morbidity and mortality rates were lower in Iraqi-born immigrants compared to native Swedes.

Keywords

Immigrants · Cancer · Middle East · Mortality · CVD · Type 2 diabetes

Abbreviations

ACM, all-cause mortality; CV, cardiovascular; CVD, cardiovascular disease; T2D, type 2 diabetes; DM, diabetes mellitus; PA, physical activity; ICD, International Classification of Disease; BMI, body mass index; LD, low-density lipoprotein; HDL, high-density lipoprotein; ISI, insulin sensitivity index; DIO, oral disposition index; SD, standard deviation; IQR, interquartile range

Funding

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P642**Abdominal pain in pediatric diabetic ketoacidosis: a single center study**

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Background

Despite typical constitutional findings (polyuria, weight loss, and polydipsia), clinical presentation of diabetic ketoacidosis also includes nausea, frequent vomiting and abdominal pain. Moreover, diffuse abdominal tenderness and diminished or absent peristalsis might mimic acute abdomen in pediatric patients. There is paucity of published data regarding prevalence, dynamics and associated laboratory findings in pediatric patients with abdominal pain in DKA.

Aim

To evaluate prevalence of abdominal pain in pediatric DKA; compare and correlate clinical and laboratory findings between children with and without abdominal pain in DKA.

Materials and methods

Ninety-nine pediatric patients' records with diagnosis "diabetic ketoacidosis" on admission from January 2016 to December 2021 were screened for this retrospective single center study. Primary inclusion criteria of DKA were met by 58 pediatric patients (pH < 7.3; blood sugar ≥ 11 mmol/l; urine ketones > + +; negative diagnostic abdominal ultrasound). Additionally we included 22 patients transported from the low resource hospital settings (pH was not measured initially) according to the standard patient pathway. These patients had already received initial resuscitation upon admission to our settings and showed improved blood sugar and pH levels. Thus, exclusion criteria of this subgroup included pH > 7.35, urine ketones < + +, with no regards to blood sugar upon secondary check-up. All patients (age range -3-17 yo) were divided into two groups: control - patients without abdominal pain (n=53), study group - patients with abdominal pain (n=27). Initial work-up included HbA1c, pH, electrolytes, CBC etc. The local institutional bioethics committee approved the study design.

ResultsPrevalence of abdominal pain was 36% (13/36) and 32% (14/44) in new onset T1DM and previously confirmed diabetes (OR: 1.2112; CI 95% [0.4779 - 3.0699], P=0.6864. Tenderness upon palpation of the LUQ and periumbilical region was elicited among 59% (16/27) and 18.5% (5/27) of patients, respectively. Mean pH upon admission was 7.16 ± 0.15 and 7.19 ± 0.11 among the controls and the study group, respectively (P=0.2901). HbA1c ranged from 7 to 17.5% (controls - 12.62 ± 2.09%; the study group - 12.41 ± 2.4%, P=0.6998). Leukocytosis was found in both groups (controls - 16.09 ± 8.81 * 10⁹/l; the study group - 15.85 ± 6.75 * 10⁹/l, P=0.9013). 71% (5/7) of patients with severe DKA, 31% with moderate (12/39) and 35% (7/20) with mild DKA suffered from abdominal pain. No significant associations between DKA severity and presence of abdominal pain were observed.**Conclusions**

One in three pediatric patients experience abdominal pain in DKA. This clinical finding is not associated with severity of DKA, pH level, WBC count and HbA1c in children with negative diagnostic abdominal ultrasound.

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P643**Physical activity assessment is crucial for obesity risk prediction in adolescent patients**Tzvetelina Totomirova¹, Mila Arnaudova², Ivanina Arabadzhieva³ & Teodor Badarov⁴¹Military Medical Academy, Clinic of Endocrinology and Metabolism, Sofia, Bulgaria; ²MBAL VITA, Sofia, Bulgaria; ³V MBAL, Sofia, Bulgaria; ⁴Military Medical Academy, Clinic of Thoracic Surgery, Sofia, Bulgaria

Physical activity is assumed to be a factor of great importance for weight maintenance. Assessment of physical activity in childhood should be done for identifying patients at risk and predicting obesity development. The aim of our study was to assess physical activity's importance as a risk factor for weight changes in boys and girls 8-18 years aged. The study include 262 subjects (128 boys, 134 girls) in single country region in Bulgaria (mean age 12.02 ± 3.03 years, mean BMI 20.38 ± 4.36 kg/sq.m). Children were asked to answer unified questions considering information about physical activity (time spent in sport, open air activities and before screen time). The information was assessed regarding BMI and weight problems. Results show that 26.87% of girls and 17.19% of boys have previous problems with body weight and 10.45% of girls and 10.93% of boys have increased body weight at the moment. Two girls (1.49%) and six boys (6.25%) were diagnosed with obesity. BMI showed negative correlation with average time spent in physical activity (r = -0.301) and open-air activities (r = -0.321) and positive correlation with before screen time (r = 0.274). No other correlations between healthy and unhealthy activity habits were established. No differences in gender and age were found. Based on our data we found out that physical activity assessment is of great importance for adolescent weight gain and risk of obesity. The increase in active sport activity and decrease of before screen time is crucial for weight maintenance and should be focused by parents in establishing of daily child's habits

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P644**Evaluation of the Frequency of Exocrine Pancreatic Insufficiency in Patients With Diabetes Mellitus**Sadi Furkan Engürülü¹, Nilüfer Özdemir², Sedat Can Güney², Serkan Erdal³, Fatma Taneli³, Elmas Kasap⁴ & Zeliha Hekimsoy²