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Type 2 diabetes mellitus develops after menarche, a disorder diagnosed by the Leptin biomarker

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Keywords: menstrual cycle , type II diabetes.

Goal of the study: To find a biomarker and a link between menarche and the development of type 2 diabetes.

Introduction: All countries irrespective of their developmental stage, face an increasing burden of non-communicable disease including diabetes mellitus (DM) [1,2]. Quantifying the prevalence of DM is important to allow for rational planning and allocation of resources. For example the prevalence of diabetes is high among the Sandy population and represents a major clinical and public health problem [3].

Method and materials: Method and materials: It were analyzed articles from Google Scholar, for the last 5 years, 2019-2024, mentioned such words as: diabetes mellitus, insulin resistance and menarche.

Results: The mean age for onset of diabetes in males and females was 57,5 and 53,4 years. The prevalence of diabetes decreased in patients older than 70 years. A Canadian national surveillance study demonstrated a minimum incidence of type 2 diabetes in children and adolescents < 18 years of age of 1,54 per 100,000 children per year. Recent data from the United States demonstrated an incidence of 5,1 per

100.000 person years in the 10 to 14 year age group and 11,8 per 100.000 person years in the 15 to 19 years age group. The average age of girls at menarche was 12.4 years [4].
Leptin (a peptide hormone that regulates energy metabolism) levels have been shown to be lower in newly diagnosed T1D patients than in insulin-treated T1D patients. Leptin is inversely related to age at menarche [5]. Leptin serves as a clinical and laboratory marker of the risk of type 2 diabetes mellitus and coronary heart disease, and is also used to diagnose obesity and secondary amenorrhea. High leptin levels are one of the factors in the pathogenesis of type 2 diabetes, creating a high probability of thrombosis. It is produced primarily by fat cells and enterocytes in the small intestine. Others researchers find explanations in body mass index, physical activity, and cardiorespiratory fitness [6].

Conclusion: There is evidence demonstrating variation in insulin sensitivity across the menstrual cycle. So type II diabetes mellitus develops after menarche. Disorders diagnosed by the biomarker Leptin. [7-11].

Refernces

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