

Smoking And The Risk Of Developing Diabetes Mellitus Type 2 In Young Adult Patients

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Received Date: 24 January 2024; **Accepted Date:** 20 February 2024; **Published date:** 14 March 2024

Citation: Amanda Pereira de Holanda. (2024). Smoking And The Risk Of Developing Diabetes Mellitus Type 2 In Young Adult Patients. *Endocrine System and Diabetes*. 3(1); DOI: 10.58489/2836-502X/011

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Abstract

“According to the latest data from the Vigitel survey (Surveillance of Risk Factors and Protection for Chronic Diseases by Telephone Survey), from the Ministry of Health, the rate of young consumers between 18 and 24 years old jumped from 7.4% in 2016, to 8.5% in 2017.” This statement demonstrates that even with public policies to combat smoking, the prevalence of this problem is still specific in Brazil and has become a common practice among young people. Smoking is a public health problem and can be defined as a chronic disease characterized by nicotine dependence, which is acquired through the consumption of products containing tobacco. Several health problems related to tobacco use, such as pulmonary emphysema, lung cancer, tongue cancer, chronic bronchitis, cataracts, osteoporosis and several studies demonstrate their relationship with the development of diabetes mellitus, this is because cigarettes increase resistance insulin by decreasing its peripheral action. Therefore, the use of tobacco deregulates glycemic control and increases the manifestation of the disease, or generates decompensation for those patients who already have the pathology. According to Dr. Fernanda Pena (endocrinologist specializing in metabolism), the risk of developing diabetes is 30 to 40% higher in smokers than in non-smokers and studies suggest that 10% of all cases of type 2 diabetes can be directly targeted to smoking.

Keywords: *Diabetes Mellitus, smoking, risk factors, young patients.*

Introduction

According to Rita Romeiro (Clinical Psychologist), “adolescence is a troubled, turbulent period that generally occurs between the ages of 13 and 19, implying many discoveries, mistakes, successes, experiments for both the adolescent and the parents and the nuclear family.” This implies that for young people there are no consequences for their actions, only the desire to make a choice, and thus, they are more susceptible to experimenting with alcohol, drugs, cigarettes and abusive behavior. Knowing this, the continuous increase in smoking among young patients demonstrates the extreme need for new public policies to raise awareness about the dangers of this practice due to its long-term health impacts. Several negative factors for tobacco use in adolescence, including: gender, age,

sociodemographic conditions, experimentation with alcohol and having had sexual intercourse at least once. It is now known that the interaction between smoking and the human body is also related to the pathogenic characteristics of Diabetes Mellitus, because cigarette smoke induces chronic inflammation and oxidative stress of vessels and tissues (Pan et al. 2011). The association between tobacco use and a decrease in the insulin range has also been scientific and is related to the lower functioning of pancreatic beta cells (Facchini et al., 1992). Therefore, the objective of this study is to present the interaction between smoking and the risk of developing type 2 Diabetes Mellitus in young adult patients.

Development

The current panorama of young smokers in Brazil is

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worrying and the numbers increase every year. Some issues influence this youth behavior, such as the need for acceptance in a certain group, smoking parents, mental health problems, experimentation and consequently nicotine dependence and, last but not least, the ease of purchasing cigarettes.

According to the analysis of data from the National School Health Survey (PeNSE 2009) carried out among students in the 9th year of elementary school in public and private schools in the capital cities and the Federal District, addressing the prevalence of risk and protective factors health: "trying cigarettes at least once in their lives was reported by 24% of students. This proportion increased with age, rising from 16% among students aged up to 13 and 41% among those aged 16 or over, but there was no difference between genders. The prevalence of regular smoking was 6.3% and also increased with age, reaching 14.4% among those aged 16 or over and did not vary between boys and girls. Among those who smoked cigarettes at least once in their lives, 49.3% did so by the age of 12, with boys tending to try it at an earlier age than girls."

These data reveal an urgency to change this scenario, since one of the main risk factors for developing Diabetes Mellitus is smoking. In conjunction with cigarette smoking, there is alcohol consumption and low physical activity (PeNSE – 2009), thus forming a scenario where young people find themselves in a process of physical inactivity, sedentary lifestyle and obesity, and this condition increases the risk for development of Diabetes Mellitus Type 2 (DM2). This is because smokers have a higher prevalence of insulin resistance (Wannamethee et al. 2005), and in addition to smoking causing chronic inflammation of tissues and vessels, it is also related to changes in lipid metabolism (Chiolero et al. 2008). Smoking can lead to endothelial dysfunction and vascular resistance, negatively influencing blood flow and glucose delivery to tissues (Pan et al. 2011).

Conclusion

From an evolutionary perspective, medicine has allowed great achievements in relation to the health of the population, however, it does not veto the need for new public policies aimed at adolescents and smoking cessation, correlating with future risks, including type 2 Diabetes Mellitus (DM2). Changing your lifestyle is crucial to achieving a quality adult life. It is important that the medical community continues to research the interaction between smoking and the development of DM2 to clarify whether there is a causal relationship and understand its pathological

mechanisms to seek other alternatives.

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