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Diabetes Mellitus Risk Factors and Quality of Life (Mini-Reviews)



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ABSTRACT

According to the World Health Organization, diabetes is defined as a chronic metabolic disorder characterized by high blood glucose levels, which results in excessive thirst and increased urination since the beta cells of the pancreas do not produce enough insulin or the body cannot effectively use the insulin it produces. Type 1 diabetes mellitus is a condition in which damage to the pancreatic beta cells is caused by a virus or an autoimmune disease, resulting in absolute insulin deficiency, while type 2 diabetes is a condition in which insulin secretion is reduced due to hereditary changes or lifestyle changes, which leads to relative insulin deficiency reason for this is that as the world progresses and information technology advances, people grow less physically active as time passes, stress increases and physical and psychological changes occur. Mongols continue to experience negative environmental conditions as a result of stress, air pollution, and urbanization as they transition from nomadic to sedentary lifestyles. Thus, in Mongolia, diabetes accounts for 41.5% of all metabolic diseases and is 82.9 per 10,000 population. Obesity in early childhood induced by stress and an unhealthy lifestyle has a significant impact on the rising number of people with type 2 diabetes. As a result, people with diabetes experience changes in their psychology and quality of life.

RATIONALE:

According to a World Health Organization research from 2017, one person dies from diabetes every seven seconds. 50% of them are under 60 years old. Diabetes is responsible for 30% of all deaths worldwide, with 425 million individuals diagnosed in 2017, and this number is expected to rise to 48 percent by 2045². Diabetes is expected to be the major cause of death for 592 million people by 2035, according to the International Diabetes Federation¹¹. The prevalence of diabetes will increase from 8.3% to 10.1% of the population. In 1980, 108 million people had diabetes; by 2014, the number had risen to 422 million. Diabetes affected 4.7 percent of adults over the age of 18 in 1980. The number of people diagnosed with diabetes grew to 8.5 percent in 2014. There is a high prevalence of diabetes in developed countries. In 2016, 1.6 million people died, compared to 2.2 million in 2012.² Over the past thirteen years, the number of people with diabetes and the prevalence of type 2 diabetes has increased in developing countries. Between 2000 and 2035, the prevalence of type 2 diabetes in South Asia is anticipated to rise by 150 percent. More than 60% of diabetics live in Asia, with China and India accounting for over half of them.⁴In Mongolia, it decreased by 17.9% compared to the previous year; disaggregated by gender, it is 77.8 per 10,000 population for men and 87.8 per 10,000 population for women. The highest rate, per age group, is 524.8 per 10,000 people aged 45 to 65. It is 69 per 10,000 people in the central region, which is the highest.⁵

Purpose: To study the prevalence and risk factors of diabetes in Mongolia and how type 2 diabetes affects the psychological state.

Diabetes risk factors include:

- **Risk factors that cannot be changed are** age, genealogy, gestational diabetes, polycystic ovary syndrome, low birth weight, and more.
- **Risk factors that can be changed are** obesity, malnutrition, physical inactivity, glucose intolerance, metabolic syndrome, alcohol intake, and smoking.

Environment:

Type 2 diabetes is believed to be the result of the interplay of environmental, biological, and behavioral risk factors. Obesity, cardiovascular diseases, high blood pressure, metabolic syndrome, and physical activity all contribute to the development of type 2 diabetes in combination with the environment. People who live in walkable neighborhoods, for example, are more inclined to walk. Obesity risk is reduced as a result of this. Limited access to supermarkets, on the other hand, can increase access to convenience stores and fast food outlets, increasing the likelihood of eating unhealthy items. These environmental choices and behaviors can control the risk of obesity, β -cell dysfunction, can regulate calorie intake and burning to affect insulin resistance. A strong social connection, safety, and a comfortable environment, on the other hand, can boost mental health or remove its negative consequences.

Long-term exposure to a variety of environmental conditions leads to "allostatic overload," or the deterioration of the physiological system. Stress can lead to smoking and drinking, disrupt sleep, and lead to unhealthy eating habits. These unhealthy habits and mental health issues contribute to metabolic changes and weight increase, which raises the risk of type 2 diabetes. Air pollution and traffic congestion can worsen the risk of high blood pressure and type 2 diabetes by lowering lipid levels in the blood. Physical activity is restricted by air pollution. Noise has an impact on both sleep and mental health. Diabetes can affect mood and destabilize core emotions.

CONCLUSION:

According to the study, urbanization and poor lifestyle choices have resulted in an increase in obesity, which has increased in diabetes cases. Obesity brought on by stress and an unhealthy childhood lifestyle is the primary cause of the rise in type 2 diabetes cases. As a result, people with diabetes experience changes in their psychology and quality of life in the long run.

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