

RISK FACTORS FOR CHRONIC KIDNEY DISEASE

Toshniyazova Gulruksor Sherzod qizi

Samarkand State Medical University, Faculty of General Medicine

Ne'matova Shahlo Dadajon qizi

Samarkand State Medical University, Faculty of General Medicine

Hamrayeva Navro'za Mahammadi qizi

Samarkand State Medical University, Faculty of General Medicine

Scientific Advisor: Anorboev Sardor Kodirberdi ugli

Samarkand State Medical University

Abstract: Chronic kidney disease (CKD) is a progressive condition that significantly impacts global health, leading to increased morbidity and mortality. The development of CKD is influenced by a combination of medical, lifestyle, and socio-demographic factors. Key medical risks include diabetes mellitus, hypertension, obesity, genetic predisposition, and chronic inflammatory processes. Lifestyle factors such as poor nutrition, physical inactivity, smoking, and exposure to environmental toxins further contribute to kidney damage. Socio-demographic variables, including age, gender, education, and socioeconomic status, affect disease prevalence and progression. Early identification and management of these risk factors are crucial for preventing CKD progression, reducing complications, and improving patients' quality of life. This review emphasizes the importance of a comprehensive approach to CKD risk assessment and prevention strategies.

Keywords: Chronic kidney disease, risk factors, diabetes, hypertension, obesity, lifestyle, socio-demographic.

Introduction

Chronic kidney disease (CKD) is a global health problem characterized by progressive loss of kidney function and a high risk of cardiovascular complications. The prevalence of CKD is increasing worldwide, driven by the rising number of patients with diabetes mellitus and arterial hypertension, as well as changes in lifestyle, adverse environmental conditions, and population aging. Numerous studies indicate that CKD development is influenced by a complex interplay of medical, social, and environmental factors, including genetic predisposition, obesity, chronic inflammatory processes, poor nutrition, smoking, and stress. Early identification and management of these risk factors are essential for preventing disease progression, reducing the incidence of complications, and improving patients' quality of life. Therefore,

investigating the risk factors for CKD is a relevant priority in modern nephrology and an important aspect of preventive medicine.

Main part

Chronic kidney disease often develops under the influence of a combination of several medical conditions. One of the key factors is diabetes mellitus, which through hyperglycemia damages glomeruli and impairs the kidney's filtration function. Arterial hypertension also plays a significant role, contributing to increased pressure in renal vessels and the development of glomerulosclerosis. Obesity, especially abdominal, is associated with metabolic syndrome and lipid metabolism disorders, accelerating CKD progression. Chronic inflammatory processes, autoimmune diseases, and hereditary predisposition further increase the risk of kidney tissue damage. Long-term use of nephrotoxic drugs, including nonsteroidal anti-inflammatory drugs, is also considered a significant factor. Additionally, electrolyte imbalances, anemia, and disturbances in uric acid metabolism contribute to further kidney dysfunction. Timely diagnosis of these factors allows slowing the progression of CKD and preventing cardiovascular complications. Regular nephrological monitoring and biochemical control of blood indicators play a key role in disease prevention.

A person's lifestyle significantly affects the risk of developing chronic kidney disease. Insufficient physical activity contributes to obesity, metabolic disorders, and high blood pressure. Improper nutrition, including high intake of salt, saturated fats, and sugar, increases the risk of hypertension and diabetes, which directly damage the kidneys. Smoking and alcohol abuse cause oxidative stress and endothelial dysfunction, enhancing renal vascular injury. Environmental pollution, exposure to heavy metals, and toxic chemicals also increase the likelihood of kidney function impairment. Chronic stress, sleep disorders, and psycho-emotional strain contribute to metabolic and cardiovascular diseases, indirectly affecting kidney health. Prevention focusing on a healthy lifestyle, balanced nutrition, and avoidance of harmful habits can significantly reduce CKD incidence. Public awareness about risk factors and regular medical check-ups are important strategies for prevention.

Socio-demographic factors also play a significant role in the development of CKD. Age is an important predictor as age increases, the risk of kidney function decline rises. Gender differences influence disease prevalence, with men more often experiencing CKD progression. Education level and socioeconomic status determine access to healthcare and the ability to maintain a healthy lifestyle. Urban residents often face stress, environmental pollution, and limited physical activity. Ethnic predisposition and family history of kidney disease increase the likelihood of early CKD onset.

Insufficient public awareness of symptoms and risk factors leads to late diagnosis and complicated disease course. Implementing educational programs, ensuring accessible medical care, and providing social support for patients can significantly reduce incidence and slow CKD progression.

Conclusion

Chronic kidney disease develops under the influence of multiple interrelated factors, including medical, social, and environmental aspects. Diabetes mellitus, arterial hypertension, obesity, genetic predisposition, and chronic inflammatory processes are key medical risk factors. Lifestyle habits, nutrition, smoking, alcohol consumption, and exposure to adverse environmental conditions also significantly affect the onset and progression of CKD. Socio-demographic factors, such as age, gender, education level, and socioeconomic status, determine access to healthcare and the ability to maintain a healthy lifestyle. Early identification and management of these risk factors form the foundation for CKD prevention, slowing disease progression, and reducing the incidence of complications. Therefore, a comprehensive approach to identifying and addressing risk factors can significantly improve outcomes for patients with chronic kidney disease.

References

1. Webster, A. C., Nagler, E. V., Morton, R. L., & Masson, P. (2017). Chronic kidney disease. *The Lancet*, 389(10075), 1238–1252.
2. Levey, A. S., Coresh, J. (2012). Chronic kidney disease. *The Lancet*, 379(9811), 165–180.
3. Thomas, B., Matsushita, K., Abate, K. H., et al. (2017). Global Cardiovascular and Renal Outcomes of Chronic Kidney Disease: A Systematic Review and Meta-Analysis. *Lancet*, 389(10075), 1236–1245.
4. Азимова, А. А., Маликов, Д. И., & Шайкулов, Х. Ш. (2021). МОНИТИРОИНГ ЭТИОЛОГИЧЕСКОЙ СТРУКТУРЫ СЕПСИСА ЗА. *PEDAGOGICAL SCIENCES AND TEACHING METHODS*, 48, 18-22.
5. Coresh, J., Selvin, E., Stevens, L.A., et al. (2013). *Prevalence of chronic kidney disease in the United States*. *JAMA*. 298(18):2038–2047.