

Potential role of risk factors, diagnosis and treatment approaches for diabetic nephropathy

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Description

Diabetic nephropathy, a complication arising from diabetes, is a condition that affects the kidneys and poses a significant threat to the overall health of individuals living with diabetes. The kidneys play a pivotal role in filtering waste and excess fluids from the blood. However, when diabetes is uncontrolled or poorly managed over an extended period, it can lead to damage of the kidneys, resulting in diabetic nephropathy, also known as diabetic kidney disease.

Diabetic nephropathy is a progressive kidney disease caused by damage to the small blood vessels within the kidneys due to prolonged high blood sugar levels in diabetes. This damage leads to the kidneys' reduced ability to filter waste products and can ultimately result in kidney failure. Notably, individuals with diabetes both type 1 and type 2 are at risk of developing this condition, with the risk increasing as diabetes remains uncontrolled or poorly managed.

■ Symptoms and progression

One of the most challenging aspects of diabetic nephropathy is its silent progression. In its early stages, it may present no noticeable symptoms, making it challenging to detect until the kidneys are significantly impaired. However, as the disease progresses, symptoms may become apparent, including swelling in the legs, ankles, feet, or hands, increased or decreased urination, persistent fatigue, nausea, vomiting, and a loss of appetite. In more severe cases, blood in the

urine, difficulty sleeping, and itchy skin can also manifest.

■ Risk factors

Several factors increase the risk of developing diabetic nephropathy are given below.

Poorly managed diabetes: Uncontrolled blood sugar levels over an extended period are a significant risk factor.

High blood pressure: Hypertension can exacerbate kidney damage in those with diabetes.

Genetics: A family history of kidney disease might increase the risk.

Smoking: Smoking can worsen the impact of diabetic nephropathy on the kidneys.

High cholesterol levels: Elevated cholesterol levels can further contribute to kidney damage.

■ Prevention and management

Prevention and early intervention are crucial in managing diabetic nephropathy. The following measures can aid in its prevention or slow its progression:

Control blood sugar levels: Maintaining healthy blood sugar levels through medication, diet, exercise, and regular monitoring is fundamental in preventing kidney damage.

Control blood pressure: Managing blood pressure effectively is vital in reducing the risk of kidney damage in individuals with diabetes.

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Healthy lifestyle: A balanced diet, regular exercise, and avoiding smoking can significantly contribute to kidney health.

■ **Diagnosis and treatment approaches**

Regular monitoring of kidney function through blood and urine tests is essential for individuals with diabetes to detect any signs of kidney damage early. Once diagnosed, treatment strategies might include medications to control blood pressure and protect the kidneys, as well as medications to manage diabetes effectively. In advanced cases, dialysis or kidney transplantation may be required.

Diabetic nephropathy stands as a formidable complication of diabetes, posing a serious risk

to kidney health and overall well-being. Early detection, proper management of diabetes, and lifestyle modifications play crucial roles in preventing or slowing down the progression of this condition. It's imperative for individuals with diabetes to work closely with healthcare professionals to monitor and manage their condition effectively, reducing the risk of developing diabetic nephropathy and preserving their kidney health.

Through proactive management, increased awareness, and a commitment to a healthy lifestyle, individuals can mitigate the risks associated with diabetic nephropathy, safeguarding their kidney health and overall quality of life.