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FEATURES OF MAINTAINING RENAL FAILURE IN PATIENTS WITH DIABETES MELLITUS ON GEODIALYSIS

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Annotatsiya:qandli diabet bilan og'rigan bemorlarda buyrak etishmovchiligini boshqarish Melitus Mellitus, keng qamrovli yondashuvni talab qiladigan murakkab qiyinchiliklarni keltirib chiqaradi. Diabetik nefritatiya surunkali buyrak kasalligining etakchi sabablaridan biri bo'lib, ko'pincha buyrakni almashtirish terapiyasiga ehtiyoj paydo bo'ladi. Ushbu hujjatda ushbu bemorlarga, shu jumladan glikemik nazorat, qon bosimini boshqarish, elektrolitlarni boshqarish, elektrolitlarni boshqarish, parhez optimallashtirishning asosiy jihatlarini o'rganadi.

Kalit so’zlar: Diabet Melitus, buyrak etishmovchiligi, glycemiya nazorati, gemodializ, elektrolitlar nomutanosibligi, dietani boshqarish, insulin terapiyasi, bemor ta'lim.

Аннотация:У пациентов с диабетом почечная недостаточность приводит к сложным трудностям, которые требуют комплексного подхода, который требует комплексного подхода. Диабетический нефритический является одной из ведущих причин хронического заболевания почек, и часто необходимость замены заместительной почечной терапии. В документе объясняются основные аспекты этих пациентов, включая гликемический контроль, управление артериальным давлением, лечение электролитов, оптимизация питания.

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Ключевые слова:диабет мелит, почечная недостаточность, контроль скольжения, гемодиализ, дисбаланс электролитов, лечение диеты, инсулиновая терапия, обучение пациентов.

Annotation:In patients with diabetes, the kidney failure leads to complex difficulties that require a comprehensive approach, which require a comprehensive approach. Diabetic Nephrithic is one of the leading reasons for chronic kidney disease, and often the need to replace renal replacement therapy. The document explains the main aspects of these patients, including glycemic control, blood pressure management, electrolytes management, dietary optimization.

Key words:diabet melitus, renal failure, glides control, hemodialysis, electrolytes imbalance, diet management, insulin therapy, patient teaching.

Introduction.Currently, more than half a billion people in the world are suffering from diabetes. According to forecasts, by 2030, the number of patients with this disease can reach up to 1.3 billion. This is due to the increase in circumstances of disability.According to scientists, the excessive weight gain of diabetes caused by malnutrition is the main factor that occurs. In this fragrance, renal cells are damaged and their ability to filter decreases.This will eventually lead to chronic renal failure development. At the same time, the function of the kidneys requires a strict and continuous diet and long-term medications .Diabetes, sugar disease is a disease caused by the organism caused by insulin shortage and metabolic interpretation of substances. KANED DIFICIENY is already known in the history of oriental folic medicine. Abu Ali ibn Sina paid special attention to this disease. "It turns out how long water is drank," he writes. The patient's drinking of the patient also causes other diseases, and the patient is very low. Stoping the treatments: "The patient said to drink cold-free liquids, slippers, drink fruits, and drink the patient, that is, wetting the patient." This means that the disease emerges due to an increase in heat in the human body. According to sugar disease, according to historical medical sources, can be a given her. In diabetes, in diabetes, blood substance increases sharply and is followed by the urine symptoms, symptoms, dashes, loss, infirmity, bodyching, etc..The disease is divided in hereditary or life, as well as insulin (1th centuries of diabetes) and not related to insulin (2tes).The 1 type of diabetes is often found in adolescence. In this case, the pancreatic cells cannot produce insulin and insulin drugs are used to reduce the amount of sugar in their treatment.In 2 rounds of diabetes, insuline production is maintained from pancreas, the amount of insulin in blood is normal or higher. Diabetes mellitus is a growing epidemic and is the most common cause of chronic kidney disease (CKD) and kidney failure. Diabetic nephropathy affects approximately 20–40 % of individuals who have diabetes,making it one of the most common complications related to diabetes. Screening for diabetic nephropathy along with early intervention is fundamental to delaying its progression in conjunction with providing proper glycemic control. Given the growing population that is now affected by diabetes and thus, nephropathy, knowledge regarding the safe use of various anti-hyperglycemic agents in those with nephropathy is of importance. In addition, attention to modification of cardiovascular disease (CVD) risk factors is essential. Altogether, knowledge regarding the prevention and management of diabetic nephropathy, along with other aspects of diabetes care, is part of the comprehensive care of any patient with diabetes. In type 1 diabetes, a number of studies show the development of microalbuminuria is associated with poorer glycemic control. In the DCCT, intensive therapy in patients with type 1 diabetes (mean A1c 9.1 % vs. 7.2 %) reduced the

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occurrence of microalbuminuria by 34 % in the primary prevention group and 43 % in the secondary intervention group (who had known early complications at baseline); risk reduction in progression to clinical albuminuria was also seen.To assess whether risk reduction of diabetic nephropathy persists long-term, the EDIC Study demonstrated there were fewer cases of new microalbuminuria and progression to albuminuria in the original intensive group. In this long-term follow-up study of the original DCCT treatment groups, it was shown that intensive treatment did result in a significant decrease in the development of estimated GFR levels of <60 ml/min/1.73 m2. In patients with type 2 diabetes, the Kumamoto study, UKPDS and Veterans Affairs Cooperative studies showed reduction of new onset nephropathy and progression of nephropathy with intensive glycemic control. A systematic review and meta-analysis of 7 trials evaluating intensive glucose control on kidney-related end points in patients with type 2 diabetes showed lower risk of developing microalbuminuria and macroalbuminuria. The intensive control groups had a median A1c ranging from 6.4–7.4 %. The A1c difference in the intensive groups compared to the control groups ranged from 0.6–2.3 %, with 4 of the studies demonstrating an A1c difference of more than 1 %. The analysis also found there was no benefit in regards to doubling of serum creatinine, development of ESRD or death related to kidney disease.The ACCORD study showed higher risk of hypoglycemia and mortality in patients with type 2 diabetes treated with intensive glucose control (mean A1c 6.4 % vs. 7.5 %), without any risk reduction on CVD. The increased mortality could not be attributed to hypoglycemia.In the ADVANCE trial, more intensive glycemic control (A1c 6.5 % vs. 7.3 %) showed no reduction in CVD. However, the intensive group had a 21 % reduction in nephropathy .The VADT study (intensive group with A1c 6.9 % vs. 8.4 %) also showed no benefit on CVD risk with stricter glucose control .The data clearly show that lowering A1c leads to benefit in regards to nephropathy. Benefits in A1c reduction are also seen on rates of retinopathy and neuropathy. However, the effect of lowering A1c is much less in regards to macrovascular disease. Thus, it is reasonable that a target A1c ~7.0 % offers an optimal risk to benefit ratio rather than a target that is considerably lower.Diabetes - a lifelong disease, it is necessary to treat it throughout life. In the high-tempered patients that are not treated and blood long, the vascular complications of diabetes - diabetes specific (macro and micropathies) are represented in high-term patients.It damages the capillaries of all members (skin, muscles, nerve, etc.). Diabetic microphosiles are observed in members more and more early in the kidneys, eye, foot and others.The development of diabetics Atheroslerosis, in turn, leads to the heartbeat disease (stanocardium, myocardium infarction), brain infringement (dizziness, brain spaces) and so on. DM is a metabolic disease that causes renal failure, and renal failure increases the need for insulin in diabetic. The accumulation of uremic toxins and increased parathyroid hormone levels in patients with chronic renal failure (CRF) cause insulin resistance in tissues, particularly skeletal muscle tissues. This has been attributed to damage in the process after insulin binding to its receptors, which disturbs glucose metabolism and glycogen production.It also seems that anemia caused by CRF has an impact on insulin resistance, and the correction of anemia by erythropoietin has been shown to increase insulin sensitivity in the body.Insulin secretion is also reduced in patients with CRF, which appears to be due to metabolic acidosis, elevated levels of parathyroid hormone, and decreased level of vitamin D.It should be noted that despite the decreased insulin secretion and impaired tissue sensitivity to insulin that occurs in patients with CRF, most nondiabetic CRF patients do not have hyperglycemia unless they are genetically predisposed.In advanced stages of CRF, when the glomerular filtration rate (GFR) become less than 15-20 cc/min, degradation and renal clearance of insulin decreases, which is clinically important in the treatment of patients

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with diabetes. Although insulin resistance increases the insulin requirement, decreased insulin degradation reduces the need for administration of insulin in diabetic patients with advanced CRF or even resolves it in patients with type 2 diabetes. This may increase the risk of hypoglycemia. Renal replacement therapy, hemodialysis, and peritoneal dialysis relatively resolve this problem in most patients and based on the amount of clinical improvement, the insulin requirements change. Increased appetite and food intake resulting from the replacement therapy and alleviation of uremic symptoms also change insulin requirements. Patients with diabetes should be screened on an annual basis for nephropathy. In individuals with type 1 diabetes, screening for nephropathy should start 5 years after diagnosis of diabetes since the onset of diabetes itself is usually known. It typically takes about 5 years for microvascular complications to develop. In patients with type 2 diabetes, screening should begin at initial diagnosis since the exact onset of diabetes is often unknown.

Diabetic nephropathy can be detected by the measurement of urine albumin or serum creatinine, and both tests should be performed at minimum annually; those with abnormal levels should have repeat tests done sooner. The first stage of nephropathy is usually the onset of elevated urine albumin which predicts the development of CKD and a gradual decline in glomerular filtration rate (GFR). Some individuals with CKD, however, do not develop elevated urine albumin initially. It is therefore important that individuals have both blood and urine screening tests performed. Using both modalities allows for identification of more cases of nephropathy than using either test alone.The urine albumin to creatinine ratio can be measured on a spot or timed urine collection such as 4 or 24 h. Microalbuminuria is defined as >30 mg/g creatinine or 30 mg per 24 h. Clinical-or macro-albuminuria is defined as >300 mg/g creatinine or 300 mg per 24 h. An abnormal value should be confirmed on at least one additional urine specimen over a 6 month period. Recently, the terms “moderately increased” and “severely increased” albuminuria have been introduced to replace the terms “microalbuminuria” and “macroalbuminuria”. Increased albumin excretion is not only a marker for early diabetic kidney disease but also for increased risk for macrovascular disease. Other causes of elevated urine protein should be considered and avoided such as infection, strenuous exercise, hypertension, heart failure and hematuria. The serum creatinine should be used to estimate GFR and thus, the level of CKD.One must also consider that the development of nephropathy may not be related to the diabetes itself. In patients with type 1 diabetes, the onset of retinopathy usually precedes the development of nephropathy. An individual who present with nephropathy but no retinopathy should have an evaluation for other causes. Referral to a nephrologist should be utilized to establish the cause of nephropathy when this is uncertain. Nephrologists are also vital to assist management of complications of advancing kidney disease, such as difficult to control hypertension, hyperkalemia and rapid progression.

Diabetic nephropathy is characterized by glomerular damage due to prolonged high blood sugar levels. This leads to increased glomerular filtration pressure and ultimately kidney damage. Monitoring and managing blood glucose levels are essential to prevent further deterioration of kidney function.

Geodialysis overview.

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Geodialysis, or peritoneal dialysis, is often used for patients with end-stage renal disease (ESRD). It utilizes the peritoneal cavity as a membrane for waste removal. This method can be beneficial for diabetic patients due to various reasons:

- Better Glycemic Control: Peritoneal dialysis can allow for more flexible dietary management.

- Reduced Insulin Requirements: The modality can potentially lower the need for insulin.

Key features in management.

1. Blood glucose monitoring

- Regular monitoring of blood glucose levels is critical.

- Aim for tight glycemic control to reduce the risk of further kidney damage.

2. Dietary modifications

- A diet low in carbohydrates and high in fiber may help manage blood sugar levels.

- Adequate protein intake is crucial for dialysis patients, but excess protein should be avoided to prevent additional kidney stress.

3. Medications.

- Use of medications like ACE inhibitors and angiotensin II receptor blockers can help in kidney protection.

- Adjustments may be necessary based on kidney function and dialysis regimen.

4. Regular assessments.

- Routine check-ups including kidney function tests, HbA1c monitoring, and foot exams are important.

- Assess for signs of cardiovascular disease, which is prevalent in diabetic patients.

5. Patient education.

- Educating patients on managing their diabetes and understanding the dialysis process is vital for compliance and outcomes.

- Emphasizing the importance of adhering to prescribed treatments can improve prognosis.

Conclusion.Managing renal failure in diabetic patients on geodialysis requires a tailored approach focusing on glycemic control, dietary considerations, and pharmacological management. Regular monitoring and patient education play key roles in optimizing health

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outcomes in this vulnerable population. By addressing these features, healthcare providers can better support patients with diabetes mellitus undergoing geodialysis.

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