

PROGRESSION OF CHRONIC KIDNEY DISEASE IN PATIENTS WITH DIABETES MELLITUS

Shah J.K., Oza.Y.R., Karpovich Y.I., Karpovich Y.L., Bogdanovich V.Ch.
Grodno State Medical University, Grodno, Belarus

Aim:

to identify risk factors of the progression of CKD in patients with diabetes mellitus.

Materials and methods:

Study involved 16 patients with mean age of 56 (3 male and 13 female). Mean duration of diabetes in these patients was 8 years. All patients were examined clinically and laboratory (glycated haemoglobin, haemoglobin, albumin in urine, creatine, eGFR, blood pressure, BMI, cholesterol profile.) The diagnosis was confirmed by presenting of diagnostic criteria. eGFR of all the patients was calculated by MDRD calculator using age, sex and creatinine and race. Risk of progression to end-stage kidney disease (with requiring dialysis treatment or kidney transplantation) based on age, gender, albuminuria, and GFR was assessed for patients with a GFR less than 60 ml/min/1.73 m², the 5-year risk of progression to end-stage renal failure (ESRD) in the meaning 0-5% may be considered low, in 5-15% interval as moderate, and > 15% as high.

RESULTS

Main laboratory parameters were next: glycated haemoglobin - 9,8% [8,1;11,1], haemoglobin - 138 g/l [110;145], albumin - 37, 38 mg/day [33;197], creatinine - 118.67 micromol/l [88;122], GFR - 83.1 ml/min/m² [49;71], BMI - 34.2 kg/m² [29,1;39,1], systolic blood pressure - 130 mm. hg [118;148], diastolic blood pressure - 80 mm hg [68;98], total cholesterol (5.23[4,1;8,1]), HDL(1.33[1,1;1,51]), LDL(2.65[2,2;3,1]), triglycerides 4.41[3,65;5,1]. 93.7% (15/16) patients have glycated haemoglobin \geq 7.5%, 62% (10/16) patients have LDL > 1.8. 81% patients (9/11) have BMI > 25.

Comorbid conditions in patients were as follows: CKD - in 100%, atherosclerosis - in 50%, dyslipidemia - in 75%, obesity - in 50%, arterial hypertension - in 100%, fatty liver disease - in 50%, myocardial infarction - in 25%.

In the 4 patient who have GFR < 60 ml/min/1.73 m². Besides diabetic nephropathy 75% (3/4) other complications seen in these patients are angiopathy (75%), retinopathy (50%), sensorineural hearing loss (50%), diabetic polyneuropathy (50%), diabetic enteropathy (25%). Drug regimen used by these patients for diabetes are insulin and oral antihyperglycemic drugs (biguanides, sulfonylureas).

The analysis of the study results showed that 25% (4/16) of patients with diabetes mellitus had GFR less than 60 ml / min / 1.73 m². So 3 out of 4 patients had lower risk of CKD progression and 1 patients had moderate risk of CKD progression.

CONCLUSIONS:

Analysis of the data showed that patients with diabetes are most often comorbid patients with not only metabolic disorders, but also diseases of the cardiovascular system. Accordingly, the risk of developing renal damage is very high, which requires the timely appointment of modern cardio-neuroprotective treatment and in the case of a high or medium risk of CKD progression, the patient should be monitored by a nephrologist constantly

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