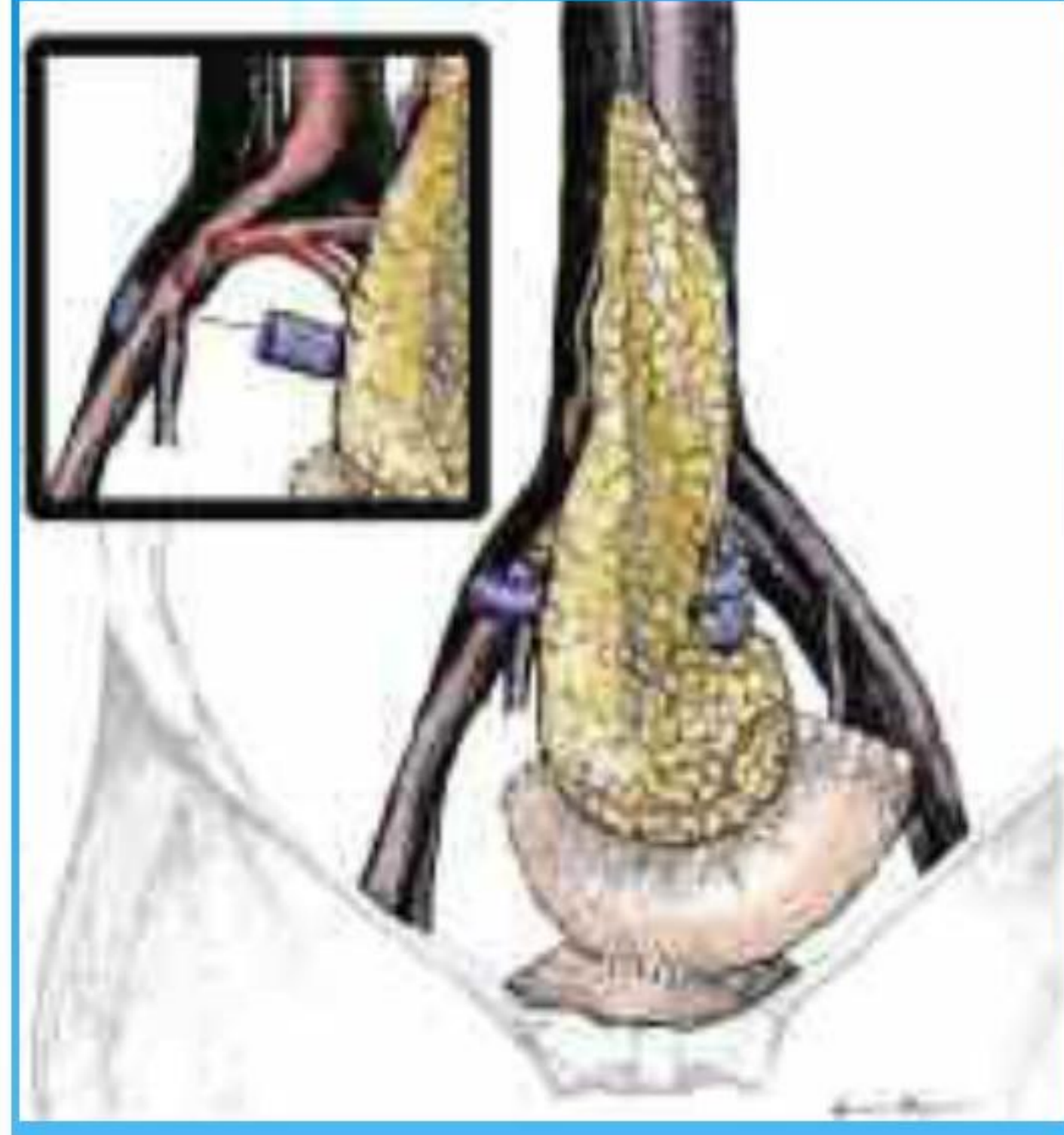


# Effect of simultaneous kidney-pancreas transplantation in patients with type 1 diabetes to stabilize/progression of complications



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## Objective

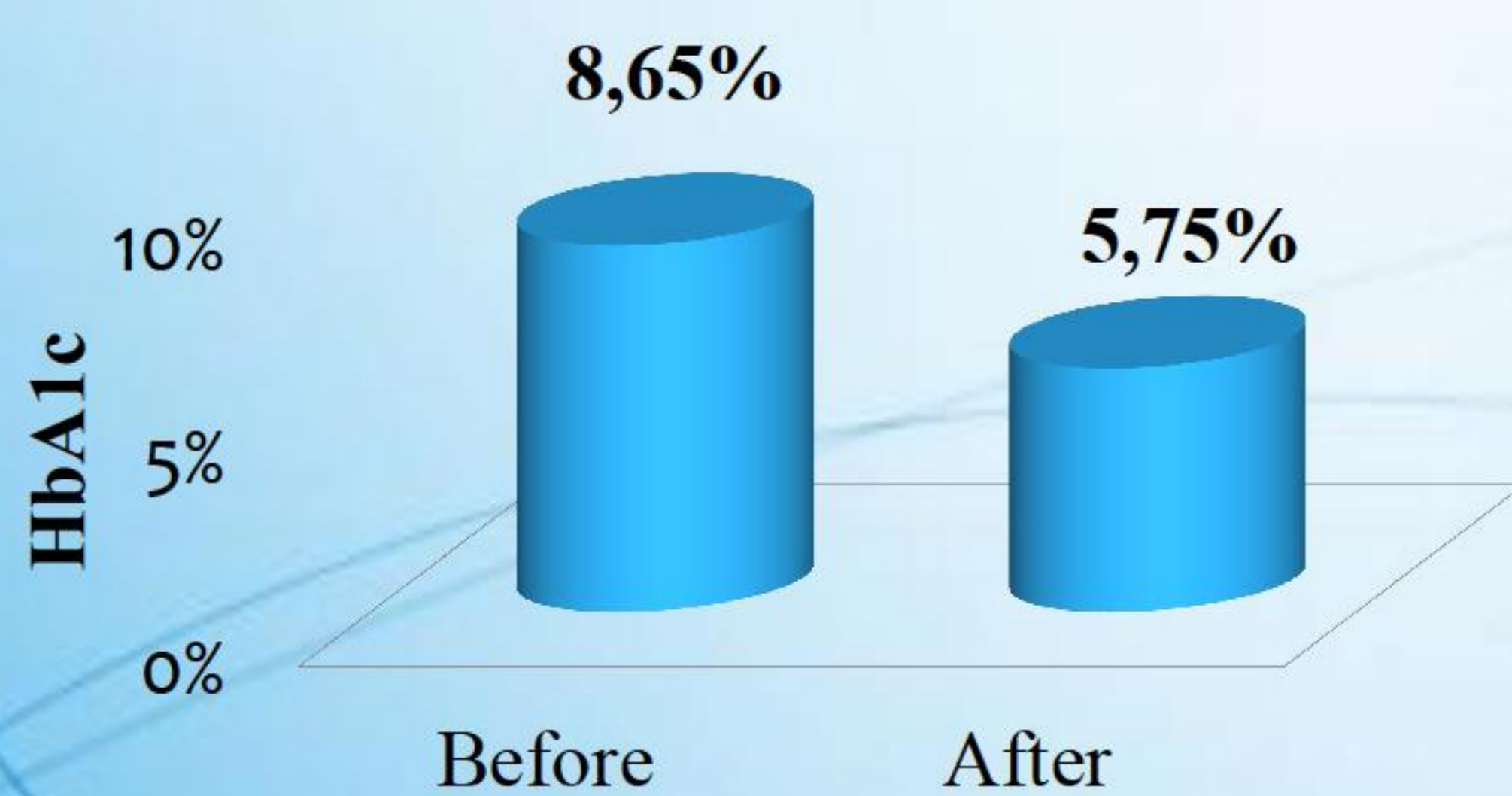
To evaluate the effect of successfully simultaneous kidney-pancreas transplantation (SPK) in patients with type 1 diabetes mellitus (T1DM) to stabilize/progression of complications.

## Materials & Methods

The study included 15 patients on standard immunosuppressive triple therapy. The average duration of T1DM was 25 years [20,5;25], the duration of diabetic nephropathy (DN) - 8 years [6;10]. All patients remained in the study for at least months 24 [8;36] after the transplantation (Table 1).

**Table 1. Characteristics of SPK-recipients**

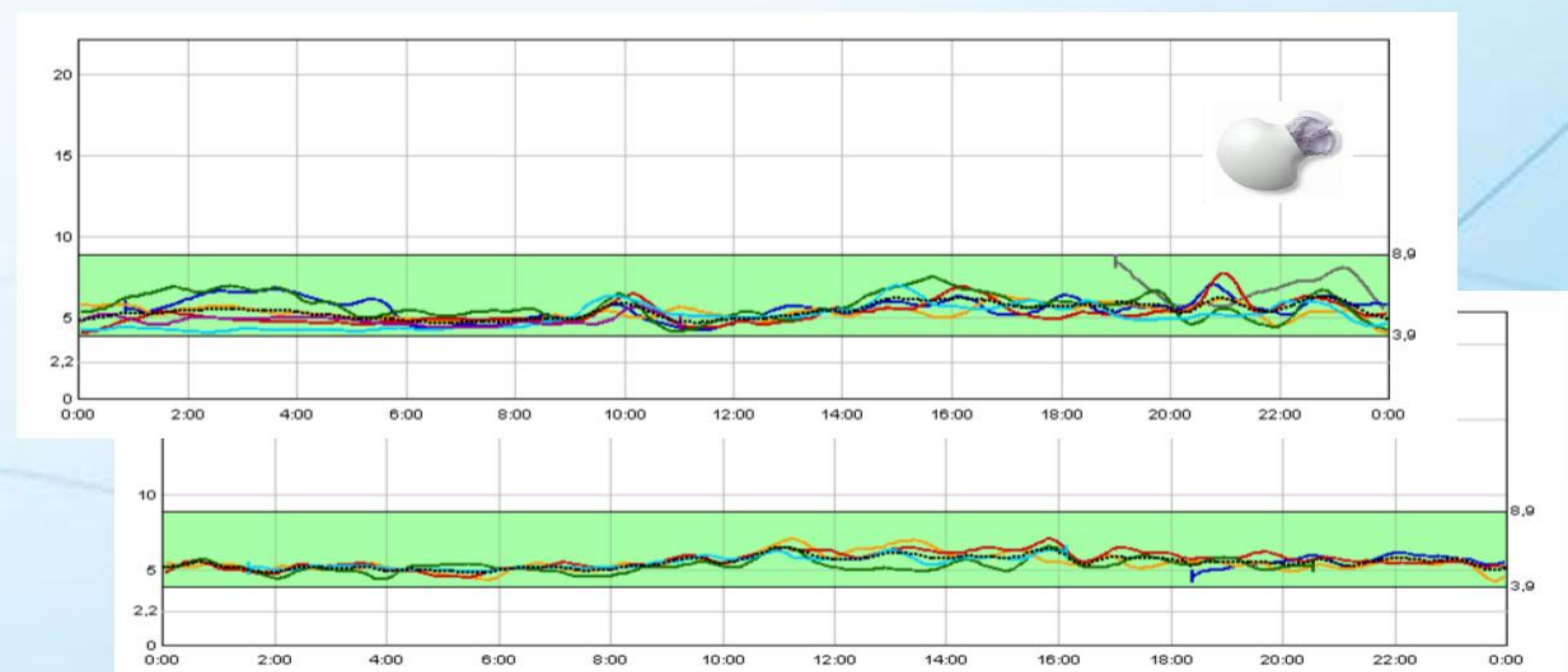
AGE(years)	34[31;40]
DM duration (years)	25[20,5;25]
DN duration (years)	7,96[6,8;9,0]
Dialysis duration(months)	12,0[7;12,0]



**Fig.1. Dynamics of HbA<sub>1c</sub> in SPK-patients**

## Results

The mean level of glycated hemoglobin (HbA<sub>1c</sub>) in the group before the study was 8,65% [8,4;9,1], then decreased to individualising glycemic targets-5,75% [5,5;5,8] after SPK (Fig.1). According to a continuous glucose monitoring system using «iPRO2» marked euglycemia during the day (glycemia 3,9-8,9 mmol/l-89%, to lower than 3.9 mmol/l-11%, higher than 8,9 mmol/l-0% of the time of day) (Fig.2). The level of C-peptide was 2,02 ng/ml [1,07;2,77], of insulin 12,5mkE/ml [11,4;15,3], Glomerular Filtration Rate 74 ml/min/1,73m<sup>2</sup> [67;89]. All patients had normoalbuminuria, normal levels of hemoglobin 120 g/l [112;130], parathormone 77,3 pg/ml [60,4;92,5], phosphorus 1,2 mmol/l [1,05;1,4], blood pressure 110 mmHg [100,0;120]. The proliferative diabetic retinopathy progression which required vitrectomy and additional laser panretinal photocoagulation sessions was observed in 20% of patients. Nonstenotic atherosclerosis of the lower extremities was detected in 13 people, ulcerative defects in the lower limbs in 5 patients and chronic osteoarthropathy progression in 4 cases.



**Fig.2. CGM system using «iPRO2» in SPK-patients**

**Conclusions:** Despite the euglycemia and renal function normalization after SPK the progression of diabetic complications was observed. This fact indicates the need of further monitoring and treatment in this category of patients.

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