CLINICAL FEATURES AND OUTCOMES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS UNDERGOING INTERVENTIONAL STENT PLACEMENT

Oyshabonu Sobirjonova[1], Zulaykho Shamansurova[1]
[1] Central Asian University, Tashkent, 1112211, Uzbekistan
oysha2004@gmail.com https://orcid.org/0009-0009-8532-1762 (O.S.)
z.shamansurova@centralasian.uz https://orcid.org/0000-0003-4024-1127 (Z.Sh.)

Relevance: Type 2 diabetes mellitus (T2DM) is strongly associated with cardiovascular disease, impaired cardiac function, and increased risk of adverse outcomes following coronary interventions. Understanding the clinical characteristics and outcomes of diabetic patients undergoing stent placement is important for improving cardiovascular management and reducing complications.

Research Objective: To compare the clinical characteristics and cardiovascular outcomes of patients with and without T2DM undergoing interventional stent placement.

Research Materials and Methods: A retrospective observational study was conducted at Akfa Medline University Hospital, Tashkent, Uzbekistan, using medical records of 12,026 patients treated between 2024 and 2025. Patients were divided into diabetic and non-diabetic groups. Variables analyzed included age, sex, body mass index (BMI), echocardiographic ejection fraction (EF), coronary angiography findings, and mortality rates.

Results and Discussion: Among the total cohort, 196 patients (1.6%) had diabetes mellitus, while 11,830 patients (98.4%) did not. Patients with T2DM had higher mean BMI values (31.1 vs 26.8 kg/m²) and lower ejection fraction values (37% vs 42%) compared with non-diabetic patients. Coronary angiography findings indicated more impaired coronary circulation among diabetic patients. Mortality rates were generally comparable between groups. These findings suggest increased cardiovascular vulnerability associated with chronic hyperglycemia and endothelial dysfunction in T2DM patients.

Conclusion: Patients with T2DM undergoing interventional stent placement demonstrated poorer cardiovascular profiles, including higher BMI and reduced cardiac function, compared with non-diabetic patients. Comprehensive cardiovascular assessment and management remain essential in this high-risk population.

CLINICAL FEATURES AND OUTCOMES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS UNDERGOING INTERVENTIONAL STENT PLACEMENT

Oyshabonu Sobirjonova[1], Zulaykho Shamansurova[1]
[1] Central Asian University, Tashkent, 1112211, Uzbekistan
oysha2004@gmail.com https://orcid.org/0009-0009-8532-1762 (O.S.)
z.shamansurova@centralasian.uz https://orcid.org/0000-0003-4024-1127 (Z.Sh.)

Abstract:

Type 2 diabetes mellitus (T2DM) is strongly associated with cardiovascular disease, impaired cardiac function, and an increased risk of adverse outcomes following coronary interventions. Understanding the clinical characteristics and outcomes of diabetic patients undergoing stent placement is important for improving cardiovascular management and reducing complications. This study aimed to compare the clinical characteristics and cardiovascular outcomes of patients with and without T2DM undergoing interventional stent placement. A retrospective observational study was conducted at Akfa Medline University Hospital in Tashkent, Uzbekistan, using medical records of 12,026 patients treated between 2024 and 2025. Patients were divided into diabetic and non-diabetic groups. Variables analyzed included age, sex, body mass index (BMI), echocardiographic ejection fraction (EF), coronary angiography findings, and mortality rates. Among the total cohort, 196 patients (1.6%) had diabetes mellitus, while 11,830 patients (98.4%) did not. Patients with T2DM had higher mean BMI values (31.1 vs 26.8 kg/m²) and lower ejection fraction values (37% vs 42%) compared with non-diabetic patients. Coronary angiography findings indicated more impaired coronary circulation among diabetic patients, while mortality rates were generally comparable between groups. These findings suggest increased cardiovascular vulnerability associated with chronic hyperglycemia and endothelial dysfunction in patients with T2DM. Overall, patients with T2DM undergoing interventional stent placement demonstrated poorer cardiovascular profiles, including higher BMI and reduced cardiac function, compared with non-diabetic patients, highlighting the importance of comprehensive cardiovascular assessment and management in this high-risk population.

Keywords: Type 2 diabetes mellitus (T2DM), interventional stent placement, cardiovascular outcomes, ejection fraction, coronary artery disease.