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**Purpose:** Even after a normal stress test results, elevated cardiovascular event rates are still observed in diabetic patients compared with non-diabetic patients. We evaluated the difference in the presence, extent, and composition of coronary artery disease (CAD) in patients with and without diabetes using multidetector computed tomography (MDCT).

**Methods:** We studied 315 diabetic patients (47% males) and 1497 non-diabetic patients (44.6% males) with known or suspected CAD undergoing 64-slice MDCT. The severity and extent of CAD, plaque of coronary arteries, clinical and laboratory parameters were analyzed. **Results:** Patients with diabetes had a higher incidence of CAD and a significantly higher obstructive CAD (>50% luminal stenosis). Among with CAD, diabetic patients had a significantly higher extent of any plaque and mixed plaque, more severe CAD (>70% luminal stenosis). On multivariate analysis, the patients with diabetes had higher risk of atherosclerotic CAD and extent of mixed plaque independent of age. **Conclusions:** In our study, the patients with diabetes had higher frequency of CAD and higher significant stenosis and extent of CAD.

Variables	Total	With diabetes	Without diabetes	P value	Variables	OR(95%CI)	P value
Presence of CAD	902 (50.5%)	222(24.6%)	680 (75.4%)	0.000	Age	1.01(1.00-1.03)	0.025
Obstructive CAD	389 (21.8%)	119 (53.6%)	270 (39.8%)	0.000	Presence of CAD	1.98(1.35-2.92)	0.001
Extent of any plaque	3.39±2.14	3.78±2.22	3.26±2.09	0.002	Extent of NCP	1.17(0.98-1.28)	0.105
Extent of NCP	1.12±1.18	1.19±1.24	1.09±1.15	0.267	Extent of MP	1.12(1.03-1.25)	0.011
Extent of MP	1.26±1.48	1.50±1.56	1.18±1.45	0.006	Extent of CP	1.05 (0.93-1.18)	0.464
Extent of CP	1.02±1.36	1.09±1.46	0.99±1.32	0.353			