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Coronary Computed Tomography Angiography Guided Percutaneous Coronary Intervention in Patient with coronary artery disease and Chronic Renal failure.

Background: Pre-PCI Coronary Computed Tomography Angiography (CCTA) can provide information on the characteristics of coronary plaques and allow pre-PCI planning. This study intended to prospectively evaluate the outcomes of CCTA guided PCI in implantation of stenting in patient with CAD and milder stages of chronic kidney disease (MS-CRF).Methods: Consecutive patients who had CCTA and had planned PCI. Inclusion criteria included de novo calcified stenoses with 50% or more diameter stenosis, and vessel diameter of 2.5 mm to 4.0 mm. Standard PCI techniques were used. Pre and post-dilatation was routinely performed. Success was defined as a residual diameter stenosis of less than 25%. Patients were monitored for major adverse cardiac events (MACE) which included myocardial infarction, target lesion revascularisation, target vessel revascularization, stent thrombosis and cardiac death. Routinely, patients had a CCTA within the first 18 months post-PCI. Results: This case-control study included 268 patients diagnosed with CAD. CRF was present in 35 % of patients with CAD. There were 84 calcified coronary stenosis which were stented with DES of which 30 lesions had soft plaque, 29 lesions had moderate calcification and 25 lesions had severe calcification. Follow-up period ranged from 9 to 27 months (mean: 12.5 + 4.1 months). Of the 94 patients, 64 underwent imaging with CCTA and there was no restenosis.Conclusion: Pre-PCI CCTA might be benefit from interventions aimed at reducing and cardiovascular risk, and Pre-PCI CCTA assessment of coronary anatomy and plaques, elective planned PCI with DES can be safely performed for coronary stenoses with CAD and MS- CRF.