

of stenting on renal function (measured by *S. creatinine*) and shed more light on the dilemma surrounding this procedure.

Materials and methods: All patients undergoing bilateral renal artery stenting at AIMS were evaluated for inclusion criteria. Patients were considered eligible if they had mild or moderate chronic renal impairment (*S. creat* <1.4 but >4.0 mg/dL) and atherosclerotic renovascular disease with demonstrable (>70% luminal diameter) stenosis involving both kidneys. The main outcome studied is *S. creatinine*.

Results: The total number of patients that underwent renal artery stenting at AIMS (both unilateral and bilateral) are 150 with 25 patients undergoing bilateral renal artery stenting. The mean *S. creatinine* just before the procedure was 1.357 which reduced to 1.294 at >2 months of follow-up. However, at >5 years follow up the mean *S. creatinine* increased to 1.508. The mean number of antihypertensive medications per patient was 2.4 before the procedure.

Conclusion: There was a reduction in *S. creatinine* 2 months after the renal artery stenting procedure. However, the initial benefit was lost at >5 years follow-up.

Role of endothelial progenitor cells and their early senescence in coronary artery disease patients



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Background: Coronary vascular disease (CVD) and coronary artery disease (CAD) occurs at earlier ages in developing countries and occurs in older individuals in developed countries. Endothelial progenitor cells (EPCs) are a population of circulating bone marrow derived cells involved in tissue development, vascular repair and atherosclerosis. They are characterized by the ability to migrate into areas of increased angiogenesis and differentiate into mature endothelial cells. There were very few studies have been carried out to demonstrate EPC's senescence in aging, atherosclerosis, and coronary artery disease (CAD) in elderly.

Aim: The study designed to explore the role of senescence in vascularity in CAD by analysing senescence in blood EPCs.

Method: A total of 25 subjects, age ≤50 years of either sex, with evidence of CAD were recruited for the study group. 25 age matched (±5 years) non-diabetic subjects without known heart disease were recruited as controls from random patients visiting Cardiology department of Narayana Medical College & Hospital, Nellore, Andhra Pradesh. 10 ml fasting venous blood sample was collected in EDTA tubes. 200 µl of the whole blood was used to quantification of EPCs (CD34+/CD133+) by flow cytometry. Mononuclear cells (MNC) were isolated from blood samples by HISTO-PAQUE. EPCs were isolated using magnetic Activated Cell Sorting (MACS) using CD 34 multisort kit. EPC senescence as determined by telomere length (EPC-TL) and telomerase activity (EPC-TA) was studied by real time polymerase chain reaction (q PCR) and ELISA-PCR respectively. Student's t test was used to compare the means of EPC number, EPC-TL, and EPCTA in cases and controls.

Results: The mean percent of EPCs (% of total WBC) were significantly ($p = 0.001$) lower in PCAD patients compared to controls (cases: 0.021 (0.018–0.028); control: 0.042 (0.035–0.048)). The mean EPC-TL (kb/genome) was also markedly lower in PCAD patients compared to controls (cases: 3.50 (3.10–4.40); control: 5.00 (4.50–6.00)). The mean relative EPC-TA (IU/cell) was lower in PCAD patients as compared to controls with significant change (cases: 1.79 (1.25–2.50); control: 2.25 (1.90–3.10)). In PCAD patients EPC numbers negatively correlated with triglyceride levels ($r = -0.315$). EPC-TL was also correlated with triglycerides ($r = -0.326$). EPC-TL positively correlated with EPC-TA ($r = 0.409$).

Discussion & conclusions: Lower EPCs in premature CAD patients in the present study suggest impaired repair mechanism predisposing to endothelial dysfunction at younger ages. Data indicates that the loss of circulating EPCs in the circulation of CAD patients may be involved in the pathogenesis of endothelial dysfunction. A shorter EPC telomere length and a reduced activity of telomerase in the young CAD patients induce accelerated senescence of EPCs, which results in lowering EPCs. The study also suggests that EPC telomere length along with EPC number could be used as an early marker in premature CAD. It may play an important mechanistic role in CAD epidemic in India, which is having PCAD higher burden.

Clinical profile of treadmill positive patients with normal coronary angiogram



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Background: Normal coronary angiogram following abnormal exercise stress test puts patients at higher risk of developing future coronary heart disease. Even with no occlusion in coronary arteries, patients are at risk of recurring coronary events such as myocardial infarction and death. However, research performed at the University of Bologna suggests that those with non-obstructive coronary disease are still at high risk for future cardiac events.

Aim of study: To study the demographic clinical and biochemical profile of patients with angina, positive exercise treadmill test and normal coronary angiogram and to determine the incidence of cardiac syndrome X in study population.

Materials and methods: Study conducted in Department of Cardiology, Sri Ramachandra Medical College and Research Institute, Chennai, This is a Cross Sectional study done from period March 2014 to February 2015. Selection of study population – Total sample size $N = 253$, Divided into 2 study groups, Group 1 ($N = 108$) male TMT positive normal CAG patients satisfying inclusion and exclusion criteria, Group 2 ($N = 145$) female TMT positive normal CAG patients satisfying inclusion and exclusion.

Statistical analysis: Continuous variables were analysed with the unpaired t test and categorical variables were analysed with Fisher Exact Test. Multiple logistic regression was used to assess the independent relation between risk factors and outcomes of the study. The data was analysed using SPSS Version 16.

Conclusion: Higher incidence of Treadmill Test positive and normal Coronary Angiogram are found in younger age especially women with no effect of Smoking, alcoholism, family history of Coronary Artery Disease, physical activity and BMI.

The incidence of Diabetes, Hypertension, Dyslipidemia, Atypical Angina were higher in women with Treadmill test Positive and normal Coronary Angiogram.