Test. Chronotropic response also significantly improved with Ivabradine.

Conclusion: Combining Ivabradine with low dose Bisoprolol in Stable Angina patients produces additional anti-anginal and anti-ischaemic benefits and improves chronotropic reserve.

Significance of troponin levels in patients with stable coronary artery disease

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Background: This study was done to determine the significance of Troponin release in patients with stable Coronary Artery Disease (CAD) by comparing Troponin I levels with CT angiography characteristics of atherosclerotic plaque.

Methods: Troponin I levels were determined in 50 consecutive patients with Stable Angina, who underwent CT coronary angiography (CTA) for clinical indications. CTA was used to assess: (1) Coronary Calcification, (2) Stenosis Severity, (3) Non-Calcific Plaque Volume.

Results: In 10 patients, Troponin I was > 0.4 (range 0 - 0.34). Weak correlation was found between Troponin I and Calcium scoring $p<0.001$, $r=0.45$ while a stronger correlation was found between Troponin I and Total Non-Calcified Plaque Burden ($p<0.001$, $r=0.79$). Patients with non-calcific plaque had significantly higher Troponin I values than those with normal vessels or those with only calcified lesions.

Conclusion: Chronic clinically stent rupture of non-calcified plaque with micro-embolisation may be a potential source of Troponin elevation. Thus Troponin I may serve as a biomarker for "vulnerable" coronary lesions even in presumably stable Coronary Artery Disease (CAD).

Duration of vascular dysfunction of brachial artery and radial artery after trans-radial access for coronary angiography

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Background: Prior studies have demonstrated that Brachial Artery endothelial dysfunction after trans-radial cardiac catheterization for diagnostic coronary angiography. However, the duration of this endothelial dysfunction was unknown.

Methods: A total of 30 patients who are undergoing coronary angiogram through transradial route were included. Using high-resolution Vascular Ultrasound Endothelium-dependent, flow-mentioned vasodilation (FMD) and administration of sublingual nitroglycerin (endothelium-independent dilatation) of Ipsilateral Brachial Artery (IRA) & Ipsilateral Radial artery (IBA) was measured before and at 6 and 24 h, one week and one month after catheterization. The left-sided Brachial Artery (BA) & Radial Artery (RA) served as a control.

Results: Baseline FMD was $14.2 \pm 4.9\%$ in the right BA, $14.0 \pm 5.1\%$ in the left BA (p = 0.88) and baseline FMD was $14.2 \pm 6.8\%$ in the right RA, $14.5 \pm 6.2\%$ in the left RA (p = 0.85). BA FMD was significantly decreased in the right intervention arm when compared to control at 6 hours and 24 hours ($4.9 \pm 6.1\%$, $14.7 \pm 5.3\%$, p value 0.000), ($5.8 \pm 7.2\%$, $15.1 \pm 5.3\%$, p value 0.000). RA FMD at 6 hours was $3.2 \pm 5.5\%$ in the right RA, $15.5 \pm 6.4\%$ in the left RA (p value 0.000) and at 24 hours FMD of RA not statistically significant. BA & RA FMD was at 1 week, 1 Month Test were not statistically significant from the control. In contrast, both NMD response and FMD/NMD ratio were unaffected by the intervention in the control arm. Kaplan-Meier Curve was drawn for the probability of recovery of BA & RA endothelial dysfunction after transradial intervention showing that 98% FMD recovered at 30 days.

Conclusion: Trans-radial cardiac catheterization leads to vascular endothelial dysfunction of the IBA with recovery of the vascular diameter by one week post procedure.

Comparison of clinical profiles of patients with acute coronary syndrome (ACS) of the age above and below 40 years

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Background: This study comparatively few studies have focused on the epidemiology and clinical profile of ACS in young patients, therefore this study was aimed to evaluate differences in risk factors, demography, clinical presentation, complications, angiographic finding & mortality in patients with acute coronary syndrome of the age above & below 40 yrs.

Methods: This is a prospective study of 200 patients of ACS done in tertiary health centre in Mumbai. Patients were divided into below & above 40 yrs of age. Data collected including the history, risk factors, mode of presentation, duration of symptoms, treatment received and investigations done i.e. lipid profile, homocysteine, blood sugars, Trop T, ECG, Chest X-ray, 2D echo, (CAG).

Results: Among 200 patients, 38 (19%) were young & 162 (81%) were older than 40 yrs with Male: female sex ratio of 5.3:1 and 2.88:1 respectively. Atypical mode of presentation was seen more among the ACS patient above 40 yrs of age (33.7%) as compared with the young patients (8 %). In STEMI patients, delayed presentation (>12 hrs of index pain) was seen in 30 patients in older age group (18.2%) while same in young group was seen in 5(13.15%)patients ; commonest cause being delay in transportation. Elderly were also more likely to have contraindications for thrombolysis (20.37Vs 7.8 %) Commonest risk factor in young group was tobacco consumption (73.68%) followed by dyslipidemia (36.8%),& in old group, HTN(58%) followed by DM(40.74%)., Hyperhomocysteinemia was seen in 20 patients in young group (52.63%) and in 31 (19.13%) in old group. Complications were seen in total 58(29%) patients, young- 7 (18.42%) & old- 52 (32%) with most common complication in young group was arrhythmias while in older group it was acute pulmonary oedema .Mortality was higher in elderly patient group (6.17Vs2.63%). Commonest Angiographic finding in young patient was Single vessel disease (52.63%). In older group double vessel disease was more common 40.12 % followed by single vessel disease in 30.86 %.

Conclusions: Though prevalence of ACS is more in elderly population, young patients are also getting affected increasingly, but with a bit different clinical profile. Younger often presented with typical presentation, has different risk factor profile, received early aggressive treatment, and had favourable outcomes. Primary prevention of smoking/tobacco, dyslipidemias and overweight should be more aggressively promoted in youngs.