Conclusion: Our study suggests that thrombolytic therapy is a reasonable option for reperfusion therapy even in case of ST elevation MI presenting after window period, with a lower rate of periprocedural complication, as compared to PCI.

A study of aspirin plus clopidogrel versus aspirin alone on saephenous vein graft patency after coronary artery bypass graft surgery – an angiographic follow-up after three months

O.S. Thopte, S.P. Patil, R.S. Deshmukh

Sri Sathya Sai Institute of Higher Medical Sciences, Prashanthigram, AP, India

Background: The co-administration aspirin-clopidogrel results in enhancement of platelet inhibition and would improve outcomes after CABG in terms of graft patency and major adverse cardiovascular events.
Objectives: The objective of this study was to examine the clinical efficacy of clopidogrel treatment on saphenous vein graft patency, incidence of major adverse cardiovascular events and safety following CABG at the end of 3 months.
Methods and Results: In this study, 74 patients undergoing coronary artery bypass grafting with SVGs were randomized to receive aspirin 150 mg plus clopidogrel 75 mg daily or aspirin 150 mg plus placebo daily for 3 months. The primary outcome was saphenous vein graft patency as determined coronary angiography at 3 months. Secondary outcomes were major adverse cardiovascular events, and major bleeding. At the end of 3 months coronary angiography was performed in 66 patients (89.1%). Overall 3 month SVG graft patency was 95.2% in the aspirin-clopidogrel group compared with 82.1% in the aspirin-placebo group ($P=0.007$), and LIMA patency was 97.1% in the aspirin-clopidogrel group versus 96.9% in the aspirin-placebo group ($P=1.000$). Freedom from major adverse cardiovascular events at 3 months was similar for the 2 groups. The incidence of major bleeding at 3 months was similar for the 2 groups (8.8 versus 6.25%, aspirin-clopidogrel versus aspirin-placebo, $P=1.000$).
Conclusions: Compared with aspirin monotherapy, the combination of aspirin plus clopidogrel did significantly improve SVG patency 3 months after coronary artery bypass grafting without increasing the risk of major bleeding complications.

Demographic, clinical profile and intermediate-term clinical outcomes of ostial and ostioproximal lesion stenting at a tertiary care referral institute in South India

P.K. Dash, B. Barooah, Prayaag Kini, Sola S.R. Varyani

Dept of Cardiology, SSSIHMS, Whitefield, Bangalore, India

Background: Ostial and ostioproximal stenting have traditionally been considered complex interventions and higher rate of restenosis was seen in the BMS era. After the advent of DES, though restenostic rates have come to single figures, most authoritative guidelines recommend surgical recourse for ostial lesions due to higher rates of reinterventions and TLR. This retrospective analysis was conducted at a tertiary care referral centre in South India to determine intermediate term clinical outcomes and rates of clinical restenosis at 9th-month follow up.
Methods: Patients who serially underwent coronary intervention for ostial and/or ostioproximal lesions between Jan 1, 2011 and Dec 31, 2012 at SSSIHMS Bangalore were studied for their symptoms, functional status, comorbidities and echocardiographic parameters, including LVEF. The demographic parameters including the age, gender and risk factors, the clinical presentation and profile, as also the angioplasty details including the stent deployment data were collected at baseline. At 9^{th} month follow-up a clinical assessment and echocardiographic follow-up was conducted.
Results: 72 patients (males=44, females =28) underwent PCI in the above period, of whom 9^{th} month clinical and echocardiographic follow-up was available in 47 patients (67.4 %). The arteries intervened upon in ostial location were: LAD in 42, RCA in 23, LCX in 5, LPDA in 1,and major OM in 1.Two patients had combined proximal RCA and op LAD stenting. Implanted stents were: **DES: 45** and BMS 32 (mainly due to compelling indications). Average stent size was **3.15 ± 1.35** mm, length-**21 mm ± 2.1 mm.** In all LMCA to opLAD stenting proximal flaring of the stent was performed.

On follow-up at 9 months : in the 47 (36/ 54 ACS : 11/18 SIHD), patients on follow-up, good compliance with medication was noted. At least 4 patients had recurrent ACS and underwent a repeat stenting at our Institute and two definite stent thrombosis occurred during hospital course.6 patients were referred for CABG due to ISR and recurrence of symptoms, of whom poor drug and DAPT compliance was noted in 3 patients. 8 of these 12 patients had stenting from the initial ACS arm. Excluding these, therefore 35 patients reported as being asymptomatic and return of acceptable quality of life .Of the 36 ACS ,21 ACS had no change or fall in LVEF but angina grade improved by at least one grade, in 15 *LVEF improved by at least 5 %* with improvement in angina,($P=0.069$). The delay in referral from occurrence of ACS to performance of PCI could explain the lack of improvement in ACS patients undergoing ostial PCI.7/11 patients with SIHD had a preserved LVEF and improvement in angina, 4 patients with SIHD continued to have symptoms of lower grade of angina and were managed medically ($P<0.01$ for improvement after PCI).
Conclusion: We inferred from our analysis that ostial stenting in ACS led to improvement in anginal symptoms at intermediate term follow-up with no significant objective improvement in LVEF especially in patients with DM; however in SIHD significant improvement in clinical symptoms with less recurrent events (less clinical restenosis) supports the feasibility of ostial stenting in this situation.

Prevalence and association of major coronary risk factors with CAD: Single centre study

K.A. Sambasivam, S. Natarajan, P.R. Vydianathan, Rajpal K. Abhaichand, P.I.S. Chakravarthi, Bivin Wilson, J.K. Periasamy, V. Nithya

G. Kuppuswamy Naidu Memorial Hospital, Coimbatore, India

Background: Different studies in our country on risk factor prevalence and association with CAD have shown varying picture. No major large scale study has been done in this part of the country.
Methods: This is a retrospective cross sectional observational study. We collected data from inpatient and outpatient records between 1995 and 2010. Data were collected with respect to presence of DM, HT, Smoking and levels of TC, HDL, LDL & TG and

presence of CAD based on angio or documented MI.. There were 11250 patients, we divided the cohort in to 2 Groups, namely, CAD + (Group 1) and CAD − (Group 2).

Results: Group-wise comparison showed the following **Results**: Mean age in Group I significantly higher. (56.36 Vs 52.95) $p \approx 0.0000$. There were significantly higher number of males in Group 1. (6125 Vs 2682) $p \approx 0.0000$. DM (41.5%Vs 21.8%) $p \approx 0.0000$. Smoking (13.1%Vs 5.7%) $p \approx 0.0000$ were significantly higher in Group 1. Mean HDL was significantly lower in Group 1. (39.42 Vs 41.75), $p \approx 0.0000$.

Stepwise logistic regression was done on 10,615 patients which showed the following.

From the logistic regression analysis, adjusted for TC, TC/HDL, HDL/LDL, HDL and HTN it is observed that:

CAD risk 3.037 times higher in males and 2.535 times higher in DM, 2.107 times higher in smokers, 1.029 times higher with each unit increase in Age. Not adjusting for Gender, analysis showed CAD risk is 2.458 times higher in DM and 2.751 times higher in smokers. Using Logistic regression model we found that in a 55 year old male, presence of diabetes increases the risk further by 18.82% and presence of smoking further increases by 9.15%.

Conclusion: 1) Traditional risk factors as age, DM, smoking have significant association with CAD. 02) Average lipoprotein levels were lower in our population.

High dose statin study

K.A. Sambasivam, S. Natarajan, P.R. Vydianathan, Rajpal K. Abhaichand, P.I.S. Chakravarthi, Bivin Wilson, J.K. Periasamy, Divya, V. Nithya

G.Kuppuswamy Naidu Memorial Hospital, Coimbatore, India

Background: There has been no Indian data on high dose statin in our country.

Aims: To assess the tolerability and safety (A 80) in high risk patients.

Methods: This is a retrospective observational study. 272 consecutive patients who were prescribed A80 and could be followed for 2 years formed the cohort. Data were retrieved from inpatient and outpatient records. Baseline demographics, initial diagnosis, interventional procedure done, list of concomitant medications, side effect profile, reason for dose reduction were all obtained and analysed.

Results: There were 238 males (87.5%) & 34 females (12.5%) Mean age was 56.4 year. HT was seen in 119 (43.75 %). DM in 109 (40.07%) Dyslipidemia in 114 (41.9 %) Tobacco use in 75 (27.57%) 236 (86.7%) patients presented with acute coronary syndrome. 204 (75 %) STEMI; 17 (6.25%) NSTEMI and 14 with unstable angina: (5.14%) 116 patients had 2VD on CAG. Mean TC 186, HDL 36.01, LDL 119, TG 143; Mean reduction in LDL was 49.3% in six months. 83 (30.51%) patients had their dose reduction for various reasons. Maximal reduction was seen in first six months, [(49/83). 62%]. 35 patients had dose reduction due to financial reasons (43%). 29 patients had dose reduction without any reason in the case file (34%). 15 patients had dose reduction due to side effects (18.07%). Cough was seen in 4 (1.47%), Abdominal pain 2 (0.735%), Constipation in 3 (1.10%), Headache in 3 (1.10%) and Tiredness in 1, necessitating dose reduction. One each had SGPT and CK elevation requiring dose reduction. CK elevation more than 10 times was seen in one patient requiring stopping the statin.

Conclusion: High dose statin therapy (A80) is safe, tolerable with minimal side effects and should be prescribed to all deserving patients similar to our study group.

Our experience of CTO angioplasties

A.U. Amladi, S. Prabhu, N.O. Bansal

J.J. Hospital and Sir Grant Medical College, Mumbai, India

Background: Chronic total occlusion is defined as complete occlusion of the coronary vessel with TIMI O flow, present for an estimated duration of >3 months. Studies have found a frequency of 15-20% of CTO in angiographies. Chronic total occlusion PCI has experienced significant growth in the last few years with the adaptation and refinement of advanced techniques.

Methods: Over the past 3 years, more than 250 CTO PTCA were performed at ourcentre. We present an analysis of these CTO PTCA done at our centre. Subjects were analysed with respect to demographics, presentation, outcome and material used.

Results: Of the patients, males composed 72 % and females 28 % of patients. The predominant presentation was chronic stable angina (42%) followed by unstable angina (24%) and NSTEMI. The average LV function was 45%, while viability of myocardium was confirmed with stress thallium scans. The vessels involved were LAD: 38%, RCA: 42%, and LCX: 20%. In 82% procedures, TIMI III flow could be established without any complications. 12% procedures were unsuccessful, primarily due to inability to cross the lesion. Complications occured in 15 % of CTO PTCA. Of these, the commonest was: flap formation (7%). Perforation occured in 6% of patients, of which 2 required placement of a covered stent, while the others were managed by balloon occlusion. 2% patients required pericardial tapping. Contrast induced nephropathy occured in 1 patient, while 4 patients succumbed in the periprocedural period. 64% of the lesions were negotiated using regular angioplasty wires (our workhorse FIELDER FC PTCA wires), while 36% required use of CTO wires.

Conclusion: CTO PTCA is one of the final frontiers of coronary interventions, our experience shows that CTO PTCA shows promising results, with complications rates that are progressively diminishing. We would like to highlight that a majority CTO PTCA were carried out using regular angioplasty wires with balloon support as opposed to CTO wires.

Role of erythrocytes in coronary artery disease

Janapati Ramakrishna, M. Jyotsna, D. Seshagiri Rao

NIZAMS Institute of Medical Sciences, Hyderabad, Telangana, India

Background: Association of Red blood cell distribution width (RDW) and coronary artery disease (CAD) is well established. But other erythrocyte parameters Mean corpuscular volume (MCV), Mean corpuscular Haemoglobin (MCH), Mean corpuscular haemoglobin concentration (MCHC) importance in pathogenesis of CAD is not studied.

Methods: Retrospective analysis of 765 patients' records (with complete Haemogram), who underwent coronary angiogram for suspected CAD in yearr 2013 at a tertiary care hospital were included in this study. Patients were grouped into angiography positive (AGP) (N=438), angiography negative (AGN) (N=327) based