Optical coherence tomogram for guiding percutaneous coronary intervention

G. Sengottuvelu, R. Ravindran

Apollo hospital, Chennai, India

Introduction: OCT as an intravascular imaging modality for guiding percutaneous coronary intervention is graduating from a research status to a routine modality in the cath lab. It provides high resolution axial and longitudinal images of the vessel that can be rapidly acquired and used for guiding PCI in a verity of situations.

Aims: To present the common indications for which we have performed OCT in our cath lab, the additional findings that we got over and above angiogram alone and the situations where OCT findings has led to a change in the strategy of management.

Methods: We performed OCT during PCI in 48 vessels in 40 patients over the last 18 months.A total of 66 runs were obtained in these 48 vessels (both pre and post PCI runs in 12 vessels, only pre PCI runs in 6 vessels & only post PCI runs in 30 vessels). Omnipaque is the contrast agent used for clearing the blood in all cases except one in whom dextran was used because of renal failure.

Results: The indications for pre PCI runs (18 runs) were lesion assessment in 12, stent thrombosis in 3, late stent evaluation in 2 and chronic total occlusion after predilation in one. All of them had findings that were not seen on angiogram and in 9 of them these findings changed the management strategy. The most common indication of OCT after PCI was sub optimal PCI result (n=30) as suspected by angiogram followed by BVS evaluation in complex lesions (n=18). All the BVS evaluations and 50 % of sub optimal PCI evaluations had additional findings not seen on angiogram and there was a change in management strategy in the form of additional high pressure post dilation, additional stenting for edge dissection or a significant distal lesion and avoidance of high pressure post dilation in a few with ACS where thrombus prolapse was the cause of sub optimal result. There was one case of stent deformation caused by OCT catheter and one patient had ventricular tachycardia during prolonged contrast injection. There was no MACE on a mean follow up of 241± 90 days.

Conclusion: OCT when performed for specific goal oriented indications will provide additional findings in majority of them. Most of these findings changes management strategy and usually increases number of post dilations and additional stenting. It is extremely useful during PCI using BVS.

2 year experience of primary percutaneous coronary intervention in a tertiary care centre

H. Uday Kumar, Limmy Loret Lobo, H. Kalpesh, D. Dushyant, K. Madhu, G. Kondal Rao, Vijay Misale, T. Sashikant, V. Rajasekhar, Vijay Patil, T. Krishna Kumar

Yashoda Hospital, Secunderabad, India

Background: Primary angioplasty is a well recommended and widely used procedure for patients with acute myocardial infarction, worldwide. The present study aimed at evaluating the experience of all Primary Percutaneous intervention in 2 years in Yashoda Super speciality hospital, Secunderabad.

Methods: The study was a retrospective analysis of all primary PCI cases done from June 2012 to June 2014 in the cardiac unit of the hospital. The data analysed included demographic, procedural and procedure results.

Results: 363 cases were done in period of 2 years. The mean age of the patients was 54.99±11.64 years. The minimum age was 25 years and maximum was 90. Majority were males (76.58%).147 cases presented with AWMI, 88 cases were diagnosed as IWMI, 34 and 20 had a combination of IWMI+ RVMI and IWMI + PWMI respectively. The average door to balloon time was 57.06 ± 32.06 min. Angiography revealed single vessel disease in 195 cases, double vessel disease in 89 cases and 72 were triple vessel disease. LAD found to be the culprit vessel in 44% and RCA in 34%. PTCA + stent was done in 331 cases whereas only POBA was done in 32 cases. Thrombus aspiration was done in 32.33% of stent procedures. PCI success with flow TIMI-3 was achieved in 95.55%. The end result was excellent in 327 cases and only 4 were unsuccessful. Complications encountered during procedures were hypotension and subsequent IABP insertion (3%), Ventricular Tachycardia/Ventricular Fibrillation and subsequent defibrillation (0.8%), Respiratory arrest and mechanical ventilation (0.5%) and cardiac arrest and CPR (0.2%). No patients were shifted for emergency CABG.

Conclusion: PCI was safe and successful in almost all cases done in our centre. It was effective in achieving reperfusion andreducing immediate mortality in patients with acute myocardial infarction.

Safety and outcome of day care based coronary angioplasty in stable cardiac patients — Pilot Trial

V.R. Singh, J. Balachander, S. Satheesh, A. Ajith

JIPMER, Puducherry, India

Background: Trans radial percutaneous coronary intervention (PCI) in a day-care (DC) setting might reduce logistic constraints on hospital resources.There are no published data DC- PCI from India.

Objective: To study safety and outcomes in stable cardiac patients undergoing DC-PCI.

Methods: This is a single centre nonrandomized prospestive controlled trial of patients undergoing elective radial PCI and sent home on same day or after overnight stay after an uncomplicated procedure. There were no angiographic exclusion criteria except left main disease. Primary end point was composite of major adverse cardiac and cerebral events until 24 hours after PCI. Secondary end points were puncture site complications, contrast induced injury, composite of major adverse cardiac and cerebral events within six months after PCI.

Results: From 1 March 2013 to 31 December 2013, 56 patients were enrolled for day care percutaneous coronary intervention. In same time period we enrolled 56 patients among those who underwent PCI as per routine hospital protocol. No major adverse cardiac and cerebral events were noted in first 24 hours in the DC group.One patient from DCgroup developed anterior wall myocardial infarction three days afterPCI. Coronary angiogram showed recanalised left anterior descending artery.No other incidence of major adverse cardiac and cerebral events noted on six months of follow up.Table 1Procedural Characteristics.