CORONARY: CHRONIC TOTAL OCCLUSION (TCTAP A-066)

TCTAP A-066

The Impact of Traditional Risk Factors in Unsuccessful Percutaneous Coronary Intervention on Chronic Total Occlusion: Single Centre Experience

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BACKGROUND Percutaneous coronary intervention (PCI) for chronic total coronary occlusions (CTOs) is among the most challenging procedures in interventional cardiology. Questions remain regarding the effect of traditional risk factors towards the successful of PCI, although J-CTO score, an established tool used to predict successful PCI, did not consider traditional risk factors as an important factor. The aim of this study is to analyze the impact of traditional risk factors (hypertension, diabetes mellitus, smoker, dyslipidemia and family history) on unsuccessful PCI of CTO.

METHODS A retrospective study was conducted between January 2015-December 2016 in Hasan Sadikin Hospital, Indonesia. All patients who underwent PCI for CTO of a native coronary artery were included, whereas patients with incomplete data were excluded. Experienced Interventionist calculated J-CTO score using parameters of lesion complexity. Comparison of categorical variables between the groups was performed using the chi-square test and one-way ANOVA for numerical variables. Multivariate logistic regression analysis was used to determine the independent predictors of unsuccessful intervention. A two-tailed *p*-value of less than 0.05 was considered as significant. The analyses were performed using the SPSS software.

RESULTS 122 patients were enrolled in this study with mean age of 59 $\pm$ 9 years and most of them (81%) were men. There were 93 patients (76.2%) in the unsuccessful group. The results analysis found that there is a relationship between hypertension and JCTO score with unsuccessful PCI ($p < 0.001$). Mean J-CTO score in hypertensive group was very significantly higher than other traditional risk factors ($p < 0.001$). There was also relationship between hypertension and unsuccessful PCI ($p < 0.001$) and after adjustment with other traditional risk factors ($p \leq 0.001$; OR = 3.59; CI = 1.32-9.77). These results were unpredicted by researchers and therefore need further study to investigate and identify the need to propose new tool for predict successful recanalization of CTO.

CONCLUSION There was an association between hypertension as one of the traditional risk factors on J-CTO score. Therefore, hypertension as the risk factors should be included as consideration to evaluate lesion complexity. Hypertensive patients tend to have more complex CTO lesion from JTO Score. Hypertension was an independent risk factor of unsuccessful PCI of CTO. Long-term follow up with a larger study population will be necessary for further research.

CORONARY: COMPLEX INTERVENTION (SMALL VESSEL, LONG LESION, CALCIFIED LESION, ETC.) (TCTAP A-067 TO TCTAP A-071)

TCTAP A-067

First Experience with Very Long Coronary Drug Eluting Stents

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BACKGROUND Treatment of long and diffuse coronary lesions is often challenging and the procedure is associated with long time, excessive amount of contrast and frequently with usage of two or even more stents with increased risk of restenosis or thrombosis. In this our work we faced the safety, feasibility, success rate and one-year result of using extra-long tapered Sirolimus eluting stent - 50 mm and 60 mm Biomime Morph (Merillife Sciences, Gujarati, India).

METHODS This is a retrospective study including 63 patients (age 70.0, SD 7, 8, 78% males, 38% with STEMI) treated with drug eluting stent Biomime Morph (50 and 60 mm) from April 2017 to December 2017. Variables such as artery, stenosis length, numbers and type of used devices (wires, balloons, extensions system), procedure and radiation time, contrast amount were analyzed. All patients underwent control angiography due to complementation of the revascularization of some other artery at a distance of 1 to 3 months.

RESULTS Vessel distribution was (LAD 38%, LCx 19%, RCA 43%). A total of 64 Biomime Morphstents (length 53.8 mm SD 4.9 mm) were placed in 63 patients. Second DES was placed in 33% of the patients (mean diameter 3.2 mm SD 0.6 mm. mean length 26.7 mm. SD 14.5 mm) so the total mean length was 62.7 mm. SD 15.7 mm). Per patient a mean of 2 wires. 2.3 balloons for preparation and 1.8 balloons for post-dilatation were used. In 25% of the patients guiding catheter extension was used. Mean X-ray time was 20.8 mm. SD 11.7 mm and the mean amount of contrast was 192.6 ml. SD 75.6 ml. Success rate in implantation of Biomime Morph stents was 100% with no periprocedural complication. At angiographic follow-up in 3 patients there were insignificant instent restenosis.

CONCLUSION Our first impression is that ultra-long drug-eluting Biomime Morph stent (50-60 mm) is a valid option in treating very long coronary artery stenosis with a good procedural success rate. That why we started a randomized study confronting one long stent and two or more other stents in treating very long coronary artery stenosis.

According to our angiographic follow-up limited to one to three months in terms of the target-related vessel, unfavorable events were very low.

TCTAP A-068

Long-term Follow-up from the NANOLUTE Registry on the Performance of Sirolimus Coated Balloon for the Treatment of In-Stent Restenosis

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BACKGROUND In-stent restenosis is associated with high recurrences after implantation of a DES. The drug-coated balloon is a novel approach to treat in-stent restenosis characterized by the absence of an additional metal scaffold at lesion site. The aim of this study is to assess the safety and efficacy of MagicTouch - Sirolimus coated balloon (Concept Medicals) in patients with in-stent restenosis.

METHODS NANOLUTE is a multicenter, real world and all-comers registry which enrolled 450 patients. The primary endpoint was the occurrence of major adverse cardiac events (MACE) defined as a composite of cardiac death, myocardial infarction (MI), target lesion revascularization (TLR) after 12 months. The analysis of the occurrence of MACE up to 3 years of clinical follow up represents the setting of this analysis.

RESULTS Of the 211 patients which had ISR in the NANOLUTE registry, 169 (80.1%) were men, 42 (19.9%) were women, and mean age was 60.6 $\pm$ 9.6 years. There was a total of 225 lesions treated with 258 SCB. 54.0% of the population had diabetes and 51.7% had hypertension. 51.2% of patients had previous history of myocardial infarction. The majority of lesions occurred in the left anterior descending artery (47.6%) followed by the right coronary (28.4%) and left circumflex (20.9%) arteries. Average length and diameter of SCB were 22.9 $\pm$ 7.5 mm and 2.9 $\pm$ 0.4 mm respectively. At 1-year clinical follow-up (available in 97.2% of the patients), 4.9% of patients developed MACE. MACE was mainly driven by TLR (4.9%) followed by TV-MI (0.5%) and no cardiac death was reported. At 2 years, 85.3% of patients completed the clinical follow-up and MACE rate was 5.6% with 5.0% TLR. At 3 years, 73.0% of patients had an available clinical follow-up which accounted for 6.5% of MACE rate and 5.8% of TLR. At 1 year, the MACE rate of patients having diabetes as comorbidity was recorded as 2.8% with no cardiac death and TV-MI reported. 169 patients had drug-eluting stent ISR. At 1 year, incidence of MACE was found to be 4.9% with 4.3% TLR and 0.6% TV-MI. The clinical follow-up of remaining patients is yet to come and update of these data will be presented at the Congress in case of acceptance.

CONCLUSION These findings indicate that MagicTouch - sirolimus coated balloon (Concept Medicals) for ISR remains a safe and effective alternative to DES at long-term follow-up.