e0479 IMPACTS OF SUCCESSFUL PERCUTANEOUS CORONARY INTERVENTION FOR CHRONIC TOTAL OCCLUSIONS ON PATIENTS WITH HEART DYSFUNCTION

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Yaling Han, Xianhua Yi, Shouli Wang, Quanmin Jing. *Shenyang Northern Hospital*

Introduction Successful percutaneous coronary intervention (PCI) for chronic total occlusion (CTO) had proven benefit for long-term survival. However, its impact on heart function of patients with heart dysfunction is uncertain. The purpose of the present study was to analyse the impacts on heart function of patients with heart dysfunction who underwent successful PCI for CTOs.

Methods Between June 1993 and December 2007, the clinical data of 472 consecutive patients with heart dysfunction in our center underwent PCI for CTOs were analysed. The mean age was 59.4 ± 11.5 years. These patients were divided into two groups according to the procedural success ($n=421$) or failure ($n=51$), in order to compare the heart function between groups. A follow-up echocardiogram examination was performed 6 months after PCI.

Results 391 (92.9%) patients in CTO success group and 46 (90.2%) patients in CTO failure group accepted the examination of echocardiogram at mean time of 6.2 ± 1.7 months. For patients underwent success CTO revascularisation, left ventricular ejection fraction (LVEF) was increased from $44.5 \pm 3.2\%$ to $50.2 \pm 5.7\%$ ($p < 0.05$), and left ventricular end-diastolic volume index (LVEDVI) was declined from $84.7 \pm 14.3 \text{ ml/m}^2$ to $78.4 \pm 13.7 \text{ ml/m}^2$ ($p < 0.05$). But the LVEF and LVEDVI had no significant changes in the CTO failure group ($42.5 \pm 4.0\%$ vs $43.6 \pm 4.1\%$ and $86.8 \pm 14.4 \text{ ml/m}^2$ vs $85.9 \pm 14.7 \text{ ml/m}^2$, both $p > 0.05$), respectively. In addition, stage of NYHA classification was improved in most people in CTO success group ($p < 0.05$).

Conclusions Successful procedures of CTO leads to the improvement of left ventricular function of patient with heart dysfunction.

e0480 LONGTERM CLINICAL OUTCOME OF PATIENTS UNDERGOING SUCCESSFUL PERCUTANEOUS CORONARY INTERVENTION FOR CHRONIC TOTAL CORONARY ARTERY OCCLUSION

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Yaling Han, Xianhua Yi, Shouli Wang, Quanmin Jing, Yingyan Ma, Xiaozeng Wang. *Shenyang Northern Hospital*

Introduction There are limited data on the impact of successful chronic total occlusion (CTO) revascularisation by percutaneous coronary intervention (PCI) on long-term outcomes.

Methods Between June 1993 and December 2006, a total of 1332 patients having PCI for a CTO were consecutively registered. In addition to an assessment of procedural outcomes, patients were followed long-term for occurrence of major adverse cardiac events (MACE). A CTO was defined as an occlusion of the artery present for at least 3 months with Thrombolysis in Myocardial Infarction flow grade 0 or 1. Long-term survival rate was estimated by Kaplan-Meier methods.

Results The overall success rate was 90.2% (1202/1332). During a median follow-up of 6.26 ± 2.52 years (median 6 years), the estimated 10-year survival rate was 76.7% in the CTO success patients and 65.5% in the CTO failure patients, respectively ($p < 0.001$). The MACE-free survival rate was significantly higher for CTO success patients compared with CTO failure patients (48.0% vs. 33.0%, $p < 0.001$). The rates of coronary artery bypass (CABG) were 4.3% vs. 14.6% ($p < 0.001$) for the CTO success and CTO failure patients, respectively. Multivariate analysis showed that procedural failure, diabetes mellitus and multivessel disease were independent predictors of death.

Conclusions Successful revascularisation for CTO improves long-term survival and reduces MACE rate and the need for CABG compared with failed procedure.

e0481 EFFICACY AND SAFETY OF TIROFIBAN TREATMENT COMBINED WITH PERCUTANEOUS CORONARY INTERVENTION IN THE ELDERLY WITH ACUTE ST SEGMENT ELEVATION MYOCARDIAL INFARCTION

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Huang Wei Guang, Wu Tong Guo, Luo Jing Yun. *Department of Cardiology Guangzhou Red Cross Hospital*

Objective To analyse the efficacy and safety of tirofiban treatment combined with percutaneous coronary intervention (PCI) in the elderly with acute ST segment elevation myocardial infarction prospectively.

Methods From May 2007 to May 2009, 104 patients who presented with acute STEMI within 12 h from onset and received successful primary PCI were enrolled into the study. All patients had angiographic evidence of initial total occlusion of infarct-related artery and finally restored to TIMI3 flow after PCI. All the patients were grouped into the tirofiban group ($n=54$) and the control group ($n=50$) according to whether tirofiban was used or not. Assessment of myocardial perfusion included Myocardial Blush Grades (MBG), and the resolution of the sum of ST-segment elevation (sumSTR) at 90 min after the procedure. Left ventricular ejection fraction (EF) was measured one week later. Major adverse cardiac events in hospital and bleeding complications were also assessed.

Results Baseline clinical and angiographic characteristics of the two groups were similar. Significant higher rates of MBG 3 were observed in the tirofiban group (88.9% vs 58.0%, $p < 0.05$). Patients received tirofiban were more likely to achieve higher sumSTR (70.3% vs 42.0%, $p < 0.05$). Ejection fraction was also increased markedly in tirofiban group than the control group (56.2 ± 7.6 vs 46.7 ± 8.5 , $p < 0.05$). In-hospital major adverse cardiac events were not different between the two groups. There were slightly more minor bleeding complications in the tirofiban group compared with the control (11.1% vs 6.0%, $p > 0.05$). No patient had major bleeding or thrombocytopenia.

Conclusion Tirofiban can further ameliorate microvascular perfusion and is safe and feasible for patients with STEMI undergoing primary PCI.

e0482 THE EFFICIENCY AND SAFETY OF THE SEEK ASPIRATION THROMBECTOMY CATHETER AND TIROFIBAN IN PRIMARY PERCUTANEOUS CORONARY INTERVENTION OF ACUTE MYOCARDIAL INFARCTION

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Huang Wei Guang, Wu Tong Guo, Luo Jing Yun, Zao Qiang. *Department of Cardiology Guangzhou Red Cross Hospital*

Objective To assess the effect of the Zeek aspiration thrombectomy catheter and tirofiban in the myocardial reperfusion and clinical prognosis in patients with acute ST-segment elevation myocardial infarction (AMI) who were undergone primary percutaneous coronary intervention (PCI).

Methods 84 patients of AMI with thrombotic burden lesion confirmed by coronary angiography were randomly divided into the aspiration catheter and tirofiban group ($n=42$) and standard percutaneous coronary intervention (PCI) group ($n=42$). Compared the TIMI flow grade, myocardial blush grade (MBG), ST segment resolution, left ventricular ejection fraction (LVEF) post PCI, haemorrhage and major adverse cardiac events (MACE) rate during hospitalisation between two groups.

Results Compared with control group, the study group improved TIMI flow grade, improved MBG and high LVEF, while the difference of MACE and haemorrhage rate during hospitalisation was nonsignificant.