disease and worse left ventricular dysfunction. Prognostic implications of BBB in diabetic patients with acute MI have yet to be clarified.

Methods: We analyzed 23,724 patients with acute MI from the Korea Acute Myocardial Infarction Registry and the Korea Working Group on Myocardial Infarction Registry. Twelve-month clinical outcome was compared between patients with BBB and those without BBB according to the presence of DM.

Results: Patients with left BBB (n = 181) were older (P < 0.001) and more likely to be men, have hypertension, DM, multi-vessel disease, left ventricular dysfunction, less likely to have chest pain at presentation and receive percutaneous coronary intervention (PCI) (67% vs. 86%) and beta blockers. In-hospital mortality was not different between patients with left BBB and those without left BBB (0.6% vs. 0.5%). However, all-cause mortality and the rate of major adverse cardiac events (MACE: all-cause mortality, MI, and repeat revascularization) were higher in patients with left BBB at 1 month (6.6% vs. 1.6%, P < 0.001 and 11.6% vs. 5.9%, P < 0.001) and 12 months (11.6% vs. 3.7%, P < 0.001 and 27.6% vs. 19.3%, P = 0.005), respectively. Patients with right BBB (n = 494) were older, more likely to be men, have prior stroke, less likely to have chest pain at presentation and PCI (81% vs. 86%). In-hospital mortality was not different between patients with right BBB and those without right BBB (0.4% vs. 0.5%). All-cause mortality and MACE were similar at 1 month (2.2% vs. 1.8% and 6.5% vs. 5.9%), but higher in patients with right BBB at 12 months (6.3% vs. 3.7%, P = 0.003) and (22.7% vs. 19.3%, P = 0.035). Diabetes with left BBB, compared to diabetics without left BBB, had higher prevalence of multi-vessel disease (80% vs. 65%, P < 0.024), which was similar in non-diabetics regardless of the presence of left BBB. On multivariate analysis, left BBB was associated with 12-month all-cause mortality in diabetes (hazard ratio: 2.6; 95% confidence interval: 1.25 to 5.25; P = 0.010), but not in non-diabetics, while right BBB was not an independent predictor of mortality regardless of the diabetic status.

Conclusion: In patients with acute MI, BBB was associated with worse 12-month clinical outcome. Particularly in diabetics, left BBB was associated with more extensive coronary artery disease and higher mortality.

TCTAP A-014

Correlation Between the Age of Thrombus and Short Term Clinical Outcomes in Patients Undergoing Primary Percutaneous Coronary Intervention

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Background: There is some data that plaque instability precedes the onset of symptoms in acute myocardial infarction. But it is not known whether the age of thrombus has any relation to short term clinical outcomes in patients treated with thrombus aspiration during primary percutaneous coronary intervention (PPCI).

Methods: Consecutive patients of ST elevation myocardial infarction (STEMI) undergoing PPCI with thrombus aspiration were included in the present study. After passing the wire in the culprit artery, thrombus aspiration was done with a suction catheter and the material was sent to histopathology lab in 10% formalin. It was processed and the microscopic sections were categorised into old and fresh thrombus, according to the existing guidelines. 30 day major adverse cardiac events (MACE) defined as the composite of death, myocardial infarction (MI) and revascularisation was calculated with age of the thrombus, after adjusting for confounding factors.

Results: Baseline characteristics like age, sex, presence of risk factors and background statin therapy were similar between the two groups. Of the total number of 79 patients who presented within 6 hours of symptom onset, the aspired material was insufficient in 7 patients. Out of the remaining 72 thrombus aspirated 40 (55.6%) showed lytic changes and were classified as old. The rest 32 (44.4%) thrombi belonged to the fresh category with intact leukocytes and fibrin. There was no MACE at 30 days in either of the categories.

Conclusion: In patients of STEMI undergoing PPCI short term clinical outcomes are excellent irrespective of the age of the thrombus. However this study needs further evaluation in a larger population with long term follow up.

TCTAP A-015

Required Multiple Aspiration Is the Sign of High Risk of Distal Embolization in Acute Myocardial Infarction

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Background: Slow-flow/no re-flow phenomenon is mainly induced by distal embolization of thrombus and necrotic core during PCI of AMI and is associated with unfavorable long-term clinical outcomes. Firstly, we perform aspiration thrombectomy for AMI patients, but we will sometimes experience slow flow or no re-flow phenomenon despite the ongoing intervention. However, the high risk patients of distal embolization are not well understood. Various imaging modalities have failed to detect high risk patients of distal embolization for whom distal protection might be beneficial. We examined if the patients who require multiple aspiration to achieve TIMI III flow are high risk patients of distal embolization.

Methods: Consecutive patients with AMI (n=135) who received PCI with filter-type distal protection device (Filtertrax) were prospectively included. We classified them into two groups by numbers of aspirations required to achieve TIMI III coronary flow: single aspiration (Group A, n=92) and multiple aspiration (Group B, n=43). We compared between the groups the frequency of filter slow flow or no re-flow phenomenon and of distal embolization captured by filter device. Distal embolization was evaluated by the pathological examination of collected material in the filter device.

Results: Although the distal embolization of thrombus was not deferent between the groups (100% vs. 96%, P=0.16), that of plaque debris was more frequent in Group B than in Group A (95% vs. 18%, P<0.0001). Filter slow flow/no re-flow phenomenon also occurred more frequently in Group B than in Group A (95% vs. 18%, P<0.0001).

Conclusion: Requirement of multiple aspirations to achieve TIMI III coronary flow was associated with high frequency of distal embolization and of filter slow flow/no re-flow.