

## Impact of periprocedural hemoglobin change on cardiovascular outcome in patients underwent percutaneous coronary intervention

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**Background:** Anemia was known as a powerful and independent predictor of major adverse cardiovascular events (MACE) in patients with acute coronary syndrome (ACS). The development of anemia during hospitalization for acute myocardial infarction was frequent and was associated with an increased long-term mortality. It has been reported that a decline of hemoglobin concentration during intensive care unit stay in ACS patients without bleeding events was powerful predictor of clinical ischemic events. However there were limited datas available if the decreased hemoglobin level is related to major adverse cardiac events (MACE) after percutaneous coronary intervention (PCI) in ACS patients. **Methods:** We retrospectively enrolled 211 patients from March 2003 through October 2009. The inclusion criteria was patients diagnosed stable angina or ACS and underwent PCI. Patients were free of blood cell transfusion or bleeding events after PCI. All patients had been checked hemoglobin level 1 day and 2 days after PCI. The 1-year incidences of MACE, including death, myocardial infarction (MI), target vessel revascularization (TVR) and stent thrombosis (ST) were evaluated in all patients included. Statistical analysis was performed using SPSS 18.0. The association between hemoglobin changes and MACE was analyzed with ANOVA. **Results:** Participated patients were composed of 167 males and mean age was 60.31±10.72. Number of patients diagnosed stable angina were 63, unstable angina were 53, non-ST segment elevation myocardial infarction were 47, and ST segment elevation MI were 42. Initial hemoglobin level was 12.0 to 17.7 g/dL (mean value 13.64±1.19). Hemoglobin change was from -4.1 to +1.8 g/dL 24 hours after PCI and from -4.0 to +1.8 g/dL 48 hours after PCI. Hemoglobin change on 1day after PCI had no significant relation with mortality, subsequent MI, TVR, and ST ( $p=NS$ ). And hemoglobin on 2day after PCI also had no relation with mortality, subsequent MI, TVR, ST ( $p=NS$ ). **Conclusions:** In patients underwent PCI, hemoglobin change day 1 and day 2 after PCI was not related to MACE in stable angina and ACS patients. Therefore routine hemoglobin follow-up after PCI is not needed if patient has low risk of bleeding.

## A successful case of rapidly propagating dissecting hematoma after percutaneous coronary intervention

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Dissecting hematoma is a rare cause of acute closure after PCI. Because angiographic findings of dissecting hematoma are various from insignificant to total occlusion, IVUS is necessary for the accurate diagnosis. If dissecting hematoma was managed as a thrombotic occlusion, a catastrophic result may occur. We report a successful case of a rapidly propagating dissecting hematoma with a prompt acquisition of IVUS image and consecutive multiple stenting. A 62-year-old woman was admitted to our hospital for unstable angina. Her risk factors for CAD were hypertension and hypercholesterolemia. There was no significant finding on ECG, cardiac markers and echocardiography. Angiography revealed significant stenosis of proximal LCX. We started one-stage PCI with a Runthrough guide wire and a 6 Fr. Judkins Lt. guiding catheter. Just after preballooning with Maverick 3.5-8 mm(10 atm), she complained of severe chest pain but her blood pressure maintained. Angiography showed dissection at the target lesion and slow distal flow. And then we performed IVUS which showed blood flow through dissection into media and formation of huge hematoma along distal segment. Subsequent angiography showed new stenosis of distal LCX. We put two stents from proximal to distal LCX. Follow angiography showed a second stenosis of far distal LCX which means distal propagation of dissecting hematoma. A third stent(Element 3.0-28) was placed. Final angiography showed no residual stenosis with good distal flow. The chest pain was nearly resolved.

