

Two cases of glycoprotein IIb/IIIa inhibitor induced thrombocytopenia

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Case report: Case 1 An 81-year-old man visited to the emergency room due to ongoing chest pain, implicating ST-segment elevation myocardial infarction (STEMI). Unfractionated heparin, aspirin 300mg, and ticagrelor 180mg were prescribed. Coronary angiography (CAG) showed subtotal occlusion of middle right coronary artery with thrombus grade 5. Coronary flow was not fully recovered after stenting due to distal embolization. (Figure A, arrow) Periprocedural tirofiban was used to reduce the thrombotic burden. We continued intravenous tirofiban for six hours. At 18 hours after primary percutaneous coronary intervention (PCI), severe thrombocytopenia occurred ($176\text{K}/\text{mm}^3 \rightarrow 2\text{K}/\text{mm}^3$). We stopped tirofiban and heparin, then switched ticagrelor 90mg twice daily to clopidogrel 75mg once daily. After five days of primary PCI, the platelet count was reversed ($150\text{K}/\text{mm}^3$). (Figure A) Anti-heparin/PF4 antibody was negative. The patient had no experience of adverse events with aspirin 100 mg and clopidogrel 75mg once daily for nine months. Case 2 A 65-year-old man was referred to the emergency room complaint of chest pain, suggesting STEMI. We administrate the unfractionated heparin, aspirin 300mg, and ticagrelor 180mg. CAG showed total occlusion of proximal right coronary artery. Coronary flow was recovered after stenting with periprocedural tirofiban use. (Figure B) We continued intravenous tirofiban for eight hours. At 12 hours after PCI, severe drop-out of platelet count was happened ($153\text{K}/\text{mm}^3 \rightarrow 2\text{K}/\text{mm}^3$). We discontinued tirofiban and heparin, and reduced dose of ticagrelor to 60mg twice daily. After three days of primary PCI, the platelet count was reversed ($133\text{K}/\text{mm}^3$). (Figure B) The patient had no experience of adverse events with aspirin 100 mg once daily and ticagrelor 60mg twice daily for eight months.

Case Summary: We firstly report two cases of tirofiban induced thrombocytopenia after primary PCI using potent P2Y12 receptor inhibitor, ticagrelor. Rapid diagnosis of glycoprotein IIb/IIIa inhibitor induced thrombocytopenia is very important to maintain the optimal anti-thrombotic therapy in patients with STEMI.

Figure

