Tirofiban induced thrombocytopenia – a rare but severe complication: case report and literature overview

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Introduction: Glycoprotein IIb/IIIa receptor antagonists are platelet antiaggregant are nowadays increasingly being used in the treatment of acute coronary syndrome (ACS) and after a percutaneous coronary intervention (PCI). Although regarded as safe, tirofiban has been reported to be associated with thrombocytopenia with incidence ranging from 0.4 to 5.6%. The underlying mechanism of tirofiban-associated thrombocytopenia has not been completely understood. Lower platelet counts associated with acute and severe thrombocytopenia in a patient may led to the increased risk for serious bleeding and mortality, during or shortly after tirofiban treatment.[1,2]

Case report: 70-year-old patient with no significant past medical history was admitted for ST Elevation Myocardial Infarction (STEMI) with an acute occlusion of the right coronary artery. The patient underwent angioplasty with stenting. Since the clot burden was large, it was decided to administer tirofiban and low molecular heparin. Initial platelet count was normal (176). Six hours later, the patient presented with macrohematuria and diffuse petechia and severe thrombocytopenia on laboratory tests (platelet count 1). Tirofiban, low-molecular-weight heparins, aspirin and ticagrelor were stopped and the patient received a transfusion of platelet pellets. After 72 hours of stopping tirofiban, the platelet count had increased to 42. There was no significant fall in hemoglobin and no recurrence of hemorrhage. The hospital course of the patient was uneventful, and he was discharged home with normal hematological test results.

Conclusion: Glycoprotein IIb/IIIa receptor antagonists have been proved effective in decreasing ischemic complications of percutaneous coronary interventions but are also associated with a risk of sudden onset of thrombocytopenia, hence the need of close monitoring after their infusion. The mechanism of this thrombocytopenia is still less understood. Further studies are necessary to answer some unresolved questions and improve antibody detection.

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LITERATURE

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