


Walking on a thin line between potent platelet inhibition for myocardial infarction and risk of hemorrhagic complications. Tirofiban induced subconjunctival hemorrhage

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Tirofiban, an antagonist of the glycoprotein IIb/IIIa receptor, is indicated for the treatment of acute coronary syndrome (ACS), in combination with heparin. Tirofiban has been shown to decrease the rate of death in myocardial infarction and refractory ischemia patients.

Herein is presented the case of a 41-year-old active smoker, transferred to our hospital for anterior ST-segment elevation myocardial infarction (Fig. 1A). Loading doses of acetylsalicylic acid (500 mg), prasugrel (60 mg) and 5000 UI of heparin were administered during transfer. Coronary angiogram demonstrated plaque rupture in the proximal left anterior descending artery (LAD) (Fig. 1B), associated with heavy thrombus burden visualized on optical coherence tomography (Fig. 1C). A high dose bolus of tirofiban (25 $\mu\text{g}/\text{kg}$) followed by a continuous infusion (0.1 $\mu\text{g}/\text{kg}/\text{min}$) was administered and percutaneous coronary intervention of LAD was performed with two drug eluting stents (Fig. 1D). Three hours after initiation of tirofiban administration, the patient developed bilateral severe subconjunctival hem-

orrhage (Fig. 1E) associated with blurred vision, prompting interruption of tirofiban perfusion. In this setting, de-escalation of P2Y₁₂ inhibitor therapy was performed, prasugrel was switched for clopidogrel. The patient thrombocyte count was within normal range. Cardiac and ophthalmologic clinical evolution were favorable. According to available research, this is the first report of severe subconjunctival hemorrhage occurring as a complication of tirofiban administration.

Potent platelet inhibition for patients presenting ACS has consistently been associated with a reduction of major adverse cardiac events. According to the most recent European Society of Cardiology revascularization guidelines, dual antiplatelet therapy associating acetylsalicylic acid and ticagrelor or prasugrel is recommended for patients presenting ACS. Glycoprotein IIb/IIIa inhibitors can be used as an adjunctive therapy during percutaneous coronary intervention in cases of high thrombus burden. Hemorrhagic complications need to be addressed with caution, justifying individualized tailored antiplatelet therapy adaptations when warranted.

Conflict of interest: None declared

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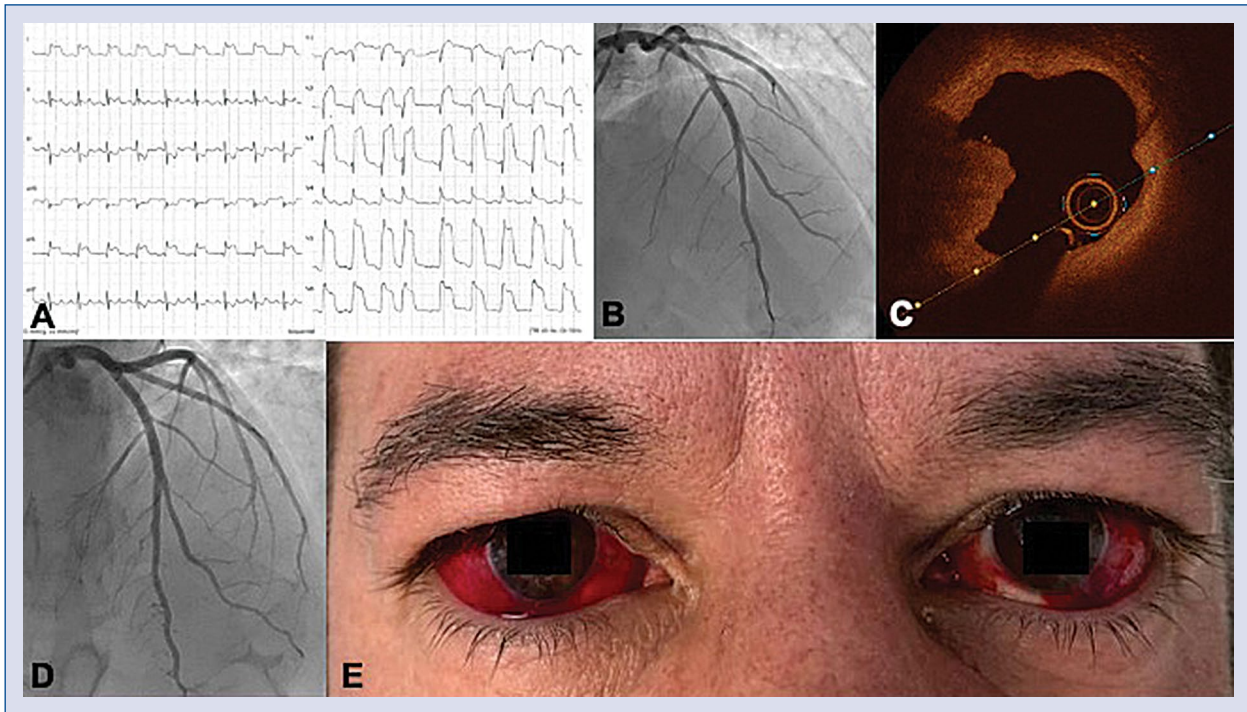


Figure 1. A. Admission electrocardiogram demonstrating anterior ST-segment elevation myocardial infarction; B. Coronary angiogram demonstrating a hazy lesion in the proximal left anterior descending artery (LAD); C. Intracoronary imaging by means of optical coherence tomography, demonstrating plaque rupture on the level of the proximal LAD; D. Coronary angiogram after percutaneous coronary intervention of the LAD with two drug eluting stents; E. Bilateral severe subconjunctival hemorrhage, developed 3 hours after initiation of tirofiban administration.