



ABSTRACTS: VOLUME 4, SPECIAL ISSUE

ABSTRACT

Perioperative management of a Glanzmann thrombasthenia patient undergoing off-pump coronary artery bypass graft surgery: A case report

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Published in March 2023

Background: Glanzmann thrombasthenia is a rare bleeding disorder caused by defective platelet aggregation and characterized by mucocutaneous bleeding: recurrent untriggered episodes of epistaxis and gingival bleeding. Glanzmann thrombasthenia is known for its' clinical variability in signs and symptoms, ranging from easy bruising to fatal hemorrhages. While mild cases are managed conservatively, platelet transfusion is needed for more severe cases. This is the first case reporting a patient with Glanzmann thrombasthenia undergoing an off-pump fashion coronary artery bypass graft surgery; with minimal platelets transfusion required.

Case Presentation: A 62-year-old male patient with Glanzmann thrombasthenia presented with a non-ST-elevation myocardial infarction after a long history of triple-vessel coronary artery disease. For the past eight years, the patient had not been provided with definitive intervention due to the high risk of bleeding, deeming him inoperable. Nevertheless, the patient was managed successfully at our center by undergoing a bleeding-free coronary artery bypass graft surgery. A multidisciplinary team oversaw his perioperative management, with a distinctive perioperative



platelet transfusion approach to evade anticipated bleeding. The surgery was done in an off-pump fashion to minimize platelet dysfunction.

Discussion: Through this case, two educational values can be acquired: Tailored perioperative platelets transfusion and an off-pump operational approach decrease the risk of bleeding and result in a favorable outcome in Glanzmann thrombasthenia patients with triple-vessel coronary artery disease, managed by coronary artery bypass graft surgery. Additionally, the psychological impact and the poor quality of life imposed by restricting treatment options for Glanzmann thrombasthenia patients should be taken into consideration when weighing the risk versus the benefit of an intervention.

Keywords: Glanzmann thrombasthenia, CABG, platelet transfusion, epistaxis, off-pump