**Title page**

# Title: Letter to the Editor: Outcomes of preoperative antiplatelet therapy in patients with acute type A aortic dissection

# Article type: Letter to the editor

**Correspondence**: 1. Jordan Gonzalo Llerena Velasteguí

Contact: +593999982666

Email: [jordanllerena1994@gmail.com](mailto:jordanllerena1994@gmail.com)

Institute: Pontificia Universidad Católica del Ecuador

Address: Ave 12 de Octubre 1076, Quito 170143, Ecuador

**Co-author:** Arsalan Nadeem

Contact: +92-3452780767 Email: [arsalannadeemh@gmail.com](mailto:arsalannadeemh@gmail.com)

Institute: Allama Iqbal Medical College

Address: Allama Shabbir Ahmad Usmani Road, Lahore, Pakistan 54550

**Words count: 439**

**Conflict of interest**: None

**Acknowledgment**: None

**Declaration:** None

**Disclosure**: None

**Funding:** None

**Letter:**

To the Editor,

We conscientiously read the article "Outcomes of preoperative antiplatelet therapy in patients with acute type A aortic dissection" by Jiang X et al.1 We sincerely congratulate the authors for their bodacious efforts. As substantiated by diverse research on the association between antiplatelet therapy (APT) and acute type A aortic dissection (ATAAD),2 we concur with the conclusion of the study that preoperative APT results in increased postoperative bleeding. However, we reckon it essential to state additional noteworthy points that would enhance the quality of this article and add to existing knowledge of this crucial preoperative procedure.

Firstly, we discerned that key baseline characteristics and variables were missing from the study. A recent retrospective study investigating the effect of preoperative dual APT (DAPT) on bleeding and mortality included the EuroSCORE II, DeBakey class, Penn class, body mass index, diabetes, creatinine, cardiac troponin I, myoglobin, and international normalized ratio (INR) as part of the patient characteristics.2 Additionally, a few clinical outcomes were not evaluated and reported, including sepsis, transfused tranexamic acid, transfused aprotinin, perioperative stroke, sternal wound infection, and 30-day mortality.2 An assessment of these characteristics and outcomes should have been carried out to enhance the validity of the results. Secondly, the study mentions that different types and doses of APT may lead to different clinical outcomes,1 Yet, the authors did not include the dosage of preoperative DAPT medication administered to the patients.3 Due to overlapping symptoms, ATAAD is often misdiagnosed as an acute coronary syndrome (ACS); thus, it is crucial to improve hospital emergency departments' diagnostic and treatment capabilities. Echocardiography (both transthoracic and transesophageal) should be used as the first-line method for ATAAD patients to identify intimal tears, dissection involvement, left ventricle contraction disturbance, and cardiac tamponade. The convenience and effectiveness of echocardiography make it an invaluable bedside check method for acute chest pain patients to distinguish ATAAD from acute coronary syndrome cases.4 Thirdly, patients with ATAAD are transfused with blood products to increase platelet count and function. A thromboelastogram can help evaluate platelet function and guide the evaluation of the perioperative coagulation function and blood product application. Thromboelastograms should be routinely used to assess patients with aortic dissection preoperative coagulation function to aid analysis.4

Fourth, the study did not include an assessment of mid-term mortality. A 2019 retrospective study conducted the Kaplan-Meier survival analysis of DAPT versus no antiplatelet therapy and reported no significant difference in survival depending on DAPT before ATAAD operation.2 There was no report of the patients' demographics included in the study that could affect the study's outcomes.2 Finally, multi-centered approaches should be adopted to enhance investigations and treatments and innovative therapies to yield alternate treatment options.

**References:**

1. Jiang X, Khan F, Shi E, Fan R, Qian X, Zhang H, Gu T. Outcomes of preoperative antiplatelet therapy in patients with acute type A aortic dissection. J Card Surg. 2022 Jan;37(1):53-61. doi: 10.1111/jocs.16080. Epub 2021 Oct 17. PMID: 34657299.
2. Hansson EC, Geirsson A, Hjortdal V, Mennander A, Olsson C, Gunn J, Zindovic I, Ahlsson A, Nozohoor S, Chemtob RA, Pivodic A, Gudbjartsson T, Jeppsson A. Preoperative dual antiplatelet therapy increases bleeding and transfusions but not mortality in acute aortic dissection type A repair. Eur J Cardiothorac Surg. 2019 Jul 1;56(1):182-188. doi: 10.1093/ejcts/ezy469. PMID: 30657880.
3. Xiao FC, Ma WG, Ge YP, Zhu JM, Sun LZ. Does preoperative dual antiplatelet therapy affect bleeding and mortality after total arch repair for acute type A dissection? Interact Cardiovasc Thorac Surg. 2022 Jan 6;34(1):120-127. doi: 10.1093/icvts/ivab226. PMID: 34999809.
4. Xue Y, Chong H, Zhu X, Fan F, Wang D, Zhou Q. Aortic dissection patients mimic acute coronary syndrome with preoperative antiplatelet therapy. J Thorac Dis. 2019 Aug;11(8):3385-3390. doi: 10.21037/jtd.2019.08.02. PMID: 31559042; PMCID: PMC6753422.