International Journal of Cardiology 292 (2019) 42

Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard

Letter to the Editor

Perioperative myocardial injury after noncardiac surgery: An easily ignored and challenging problem

J. Xie [a], L. Qiu [a], Y. Tao [a,*], T. Zhu [b]

[a] Department of Cardiology, Shengzhou People's Hospital, The First Affiliated Hospital of Zhejiang University Shengzhou Branch, Shengzhou City, Zhejiang Province 312400, China
[b] Department of Cardiology, The Second Xiangya Hospital of Central South University, No. 139 Middle Renmin Road, Furong District, Changsha City, Hunan Province 410011, China

ARTICLE INFO

Article history:
Received 4 April 2019
Accepted 18 April 2019

Keywords:
Perioperative myocardial injury
Noncardiac surgery
High-sensitivity troponin

We read with great interest the article presented by Carlo Rostagno and his team [1] about perioperative myocardial infarction in elderly patients with hip fracture. In the research, 12.5% of the patients suffered from perioperative myocardial injury (PMI) which have been proved associated with a significantly increase in 30-day and 1-year mortality. In addition, as a large international study, the Vascular Surgery Patients Cohort Evaluation Study [2] also demonstrated perioperative high-sensitivity troponin (hsTn) elevation after noncardiac surgery was significantly associated with 30-day mortality. Moreover, the cases of PMI with or without ischemic symptom have similar 30-day mortality. However, 93% of the PMI cases did not experience any ischemic symptom. Therefore, most of the PMI cases would have gone undetected without hsTn monitoring. For high-risk patients, perioperative TnI monitoring is imperative for identifying patients with PMI. Multidisciplinary collaboration is recommended to assess the risk of both surgery and major cardiovascular events. Coronary arteriography and cardiac magnetic resonance imaging are appropriate to further confirm the pathophysiological mechanism of myocardial injury. Perioperative ischemic evaluation trial [3] demonstrated that patients of PMI may benefit from aspirin and statin which were found associated with a statistically significant, risk-adjusted reduction in 30-day mortality. Large clinical trials are needed to establish effective treatments for patients of PMI after noncardiac surgery.

References

[1] C. Rostagno, A. Peris, G.L. Polidori, et al., Perioperative myocardial infarction in elderly patients with hip fracture. Is there a role for early coronary angiography? Int. J. Cardiol. 284 (2019) 1–5.
[2] P.J. Devereaux, B.M. Biccard, A. Sigamani, et al., Association of postoperative high-sensitivity troponin levels with myocardial injury and 30-day mortality among patients undergoing noncardiac surgery, JAMA 317 (16) (2017) 1642–1651.
[3] P.J. Devereaux, D. Xavier, J. Pogue, et al., Characteristics and short-term prognosis of perioperative myocardial infarction in patients undergoing noncardiac surgery: a cohort study, Ann. Intern. Med. 154 (8) (2011) 523–528.

* Corresponding author at: Department of Cardiology, Shengzhou People's Hospital, The First Affiliated Hospital of Zhejiang University Shengzhou Branch, No. 666 Dangui Road, Sanjiang District, Shengzhou City, Zhejiang Province 312400, China.
E-mail address: taoyuanyuan06@163.com (Y. Tao).

https://doi.org/10.1016/j.ijcard.2019.04.059
0167-5273/