Invited Commentary

A commentary on: Prognostic effect of troponin elevation in patients undergoing carotid endarterectomy with regional anesthesia - A prospective study (Int. J. Surg. 2019;71:66–71)

In a recent prospective study, Pereira-Macedo et al. investigated the prognostic effect of troponin elevation in patients undergoing carotid endarterectomy with regional anesthesia [1]. They measured troponin I in patients in the postoperative period of carotid endarterectomy to define Myocardial Injury after Non-cardiac Surgery (MINS). They found that MINS was associated with long-term occurrence of Myocardial Infarction (MI) and Major Adverse Cardiovascular Events (MACE).

Postoperative events after carotid endarterectomy predispose patients to considerable morbidity and morbidity. Postoperative stroke and MI significantly reduce survival after carotid endarterectomy [2]. Prior Coronary Artery Disease (CAD) is also a significant predictor of MI after carotid endarterectomy [3]. To identify existing risk factors to prevent perioperative cardiovascular events is important to reduce morbidity and mortality after carotid endarterectomy.

The recent study by Pereira-Macedo et al. [1] brings our attention in identifying MINT in early postoperative period as a risk predictor in patients who will develop MI or MACE on long-term follow-up. Serial and systematical checking of troponin I or high-sensitive troponin I values in postoperative period can potentially detect MINS and identify patients at risk.

This study showed the incidence of MINS after carotid endarterectomy with regional anesthesia to be 15.3%. Furthermore, MINS was strongly associated with chronic heart failure [1]. As MI and other cardiovascular events can occur after carotid artery stenting (CAS) [4], serial troponin measurements should also be done in patients undergoing CAS. Moreover, troponin measurement is invaluable in patients ≥ 75 years of age, with a history of diabetes mellitus, hypertension, heart failure, coronary disease, and end-stage renal failure who are undergoing carotid endarterectomy or CAS, as these patients are associated with MINS [5].

Provenance and peer review

Invited Commentary, internally reviewed.

Data statement

This manuscript does not contain data.

References

[1] J. Pereira-Macedo, J.P. Rocha-Neves, M.F. Dias-Neto, J.P.V. Andrade, Prognostic effect of troponin elevation in patients undergoing carotid endarterectomy with regional anesthesia - a prospective study, Int. J. Surg. 71 (2019) 66–71.

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