

Myocardial injury after non-cardiac surgery: a new clinical entity

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Abstract

Objectives: The objective was to determine the diagnostic criteria of a prognostically important troponin elevation following non-cardiac surgery.

Background: A postoperative troponin leak following non-cardiac surgery is independently associated with 30-day mortality. Importantly, even what was previously considered to be an insignificant troponin leak has been independently associated with 30-day mortality in unselected surgical patients ≥ 45 years of age.¹

Method: This study forms part of the prospective observational study known as the VISION (Vascular Events In Noncardiac Surgery Patients Cohort Evaluation) study.¹ Diagnostic criteria were established for prognostically important myocardial injury following non-cardiac surgery from 15 000+ patients. A Cox regression analysis was undertaken to determine the independent predictors of 30-day mortality following non-cardiac surgery. The potential independent variables entered into the regression included preoperative variables, perioperative complications, and possible diagnostic criteria for myocardial injury after non-cardiac surgery.

Results: Elevated troponin after non-cardiac surgery (without any evidence of a non-ischaemic cause like sepsis), independently predicted 30-day mortality. The presence of an ischaemic feature, as required for the *Universal definition of myocardial infarction*, did not change the diagnostic performance of the elevated troponin alone.

Conclusion: Myocardial injury after non-cardiac surgery should be considered a new clinical entity. A troponin leak alone is considered to be prognostically important. The presence of ischaemic features should not be considered as a criterion for intervention in troponin-positive patients following non-cardiac surgery.

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References

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