

PROADRENOMEDULIN AS A PREDICTOR OF MORTALITY IN MAJOR NON-CARDIAC SURGERY

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Anesthesiologists are in daily contact with patients who are preparing for non-cardiosurgical interventions, and who have an increased risk of developing cardiovascular complications in the perioperative period. Less than 1% of patients develop perioperative IM, however the mortality rate for this complication ranges from 30% to 50%. The first step is the identification of patients in whom the cardiovascular system is a potential source of complications during and after surgery. The risk of perioperative complications depends on the condition of the patient prior to the intervention, prevalence of comorbidities and the extent, urgency and duration of the operation.

The modern concept of preoperative preparation of patients for major non-cardiac surgery is now based on the measurement and interpretation of various biomarkers as prognosticators of perioperative cardiovascular complications and fatal outcomes. For these purposes, high-performance natriuretic peptides and cardiac troponins are used. There is evidence that the levels of cardiac-specific troponins, and especially high-sensitivity troponin T (hs-TnT), have been elevated in patients with various cardiovascular diseases such as: cardiac insufficiency and coronary disease, reflecting in this way a lower degree of damage that can be of significant benefit in the preoperative assessment of cardiovascular morbidity and mortality in elective, major non-cardiac surgery. Although various natriuretic peptides have been in the greatest focus of interest as prognostic biomarkers over the past decade, the interest in other circulating biomarkers, such as mid-regional proadrenomedulin (MR-pro ADM), has been growing in recent years.

This new biomarker represents a stable circulating peptide, and is the prohormone of adrenomedulin, a hormone responsible for regulating the volume of circulating fluid and electrolyte homeostasis. Elevated levels of this biomarker are seen in heart failure of different etiologies and can therefore serve as a useful prognostic marker of the development of perioperative cardiovascular complications in patients with different cardiovascular comorbid conditions.

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