New guidelines for cardiac risk reduction during non cardiac surgery, Review

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(30 minutes presentation)

There has been increasing interest in identifying medical strategies to reduce perioperative cardiovascular risk in noncardiac surgery. Non-cardiac surgical procedures (major intra-abdominal, thoracic, vascular, and orthopaedic procedures) performed in persons older than 65 years have been found to be associated with significant perioperative cardiovascular morbidity and mortality. The association of inflammatory mediators, cardiovascular disease, and postoperative outcome (short and long term) is increasingly recognized. The perioperative period is characterized by tissue injury and proinflammatory events. The relationship between the type, depth of anesthesia, surgery, the inflammatory response, and short or long-term outcome may exist. Compelling evidence indicates that aggressive management in the perioperative period may substantially decrease the adverse consequences of myocardial ischemia and infarction. The anesthesiologist has to be aware of the factors useful to estimate the perioperative cardiovascular risk, and of the medical preventive treatment or further interventions to adopt in patients candidate to surgery.

The objective of this presentation is to review the pathophysiology of perioperative cardiac complications and cardiac risk assessment and risk reduction strategies. The direct impact of hyperglycemia or hypoglycemia on cardiovascular mortality in patients with or without diabetes during the perioperative period is a central interest of the review. The new debate concerning the value of β-Blockers prescribed to all patients will also be discussed. Coronary revascularization for high-risk patient, who have a clearly defined need for revascularization independent of the need for major noncardiac surgery, is also reviewed. Statins are another class of cardioprotective agents, which need to be discussed in the presentation, because of its direct anti-inflammatory effects. The updated guidelines on perioperative cardiac evaluation and care of cardiac patients undergoing non cardiac surgery are included.