

Perioperative Organ Protection in Cardiac Surgery

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1. Introduction

Perioperative organ protection refers to the set of strategies to lessen the intensity of the surgical and anesthetic stress. A better understanding of mechanisms involved in tissue hypoperfusion, ischemia-reperfusion phenomena, and the protection triggered by certain anesthetic techniques, drugs and adjuvants have been very useful in perioperative organ protection, especially in patients with comorbidities and / or undergoing high risk surgical procedures.

2. Myocardial protection

Among the methods used during cardiac anesthesia, the use of anesthetic drugs and techniques that increase tolerance to ischemia and contribute to protect myocardial function have been gaining importance in clinical practice and may influence the postoperative course. Myocardial ischemia triggers a cascade of cellular events that start mildly and become increasingly deleterious as the ischemic time passes. Although reperfusion is the end of the ischemic process and is essential for the restoration of normal cell function and survival, it may paradoxically amplify the damage secondary to ischemia and compromise postoperative outcome.

Effects of Anesthetics drugs: For more than three decades, there is growing evidence that inhaled volatile anesthetics can protect the myocardium from ischemic reversible and irreversible injuries (1). The mechanisms by which these drugs promote cardioprotection are not fully known and it is suggested that the mechanism induced by inhaled anesthetics seems to mimic the ischemic preconditioning. Halogenated anesthetics reduce blood pressure, cause depression in myocardial contractility, coronary vasodilation, slow the conduction of electrical stimuli and attenuate the activity of the sympathetic nervous system, which contributes to decrease the myocardial oxygen consumption. However, mechanisms other than the adequacy of oxygen supply and consumption appear to be related to the cardioprotection conferred by inhaled anesthetics, such as the preservation of high energy phosphates(2). The modulation of calcium influx to the cardiomyocyte(3)

Perioperative Organ Protection

Katrin Zwirgmaier



Perioperative Organ Protection:

Perioperative Organ Protection Book Review: Unveiling the Magic of Language

In an electronic digital era where connections and knowledge reign supreme, the enchanting power of language has been much more apparent than ever. Its capability to stir emotions, provoke thought, and instigate transformation is truly remarkable. This extraordinary book, aptly titled "**Perioperative Organ Protection**," published by a highly acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound effect on our existence. Throughout this critique, we shall delve to the book's central themes, evaluate its unique writing style, and assess its overall influence on its readership.

<https://pinsupreme.com/files/virtual-library/Documents/perioperative%20laser%20nursing%20a%20practical%20guide.pdf>

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