

Srivastava N.

**CARDIAC ARREST DURING SURGERY. RESUSCITATION AND MANAGEMENT
FOR THE ANESTHESIOLOGIST**

Tutor: senior lecturer Morozova N.I.

*Department of Anesthesiology and Reanimatology
Belarusian State Medical University, Minsk*

The relevance of discussing cardiac arrest during surgery lies in the critical nature of this potential complication and the importance of understanding the factors that can contribute to its occurrence. Cardiac arrest during surgery is a life-threatening event that requires immediate and effective intervention to prevent adverse outcomes such as brain damage or death.

Anesthesiologists and other healthcare providers involved in peri-operative care must be aware of the risk factors, causes, and management strategies for cardiac arrest during surgery to ensure patient safety. By recognizing the signs of impending cardiac arrest and implementing appropriate interventions promptly, healthcare teams can improve outcomes and minimize the impact of this serious complication.

A retrospective analysis and data gathering of different norms and regulation regarding preoperative check-up from Indian society of anesthesiologist Delhi branch, <https://isawebdelhi.in> as well as textbooks such as Morgan and Mikhail's Clinical Anesthesiology written by John F. Butterworth, David C. Mackey, John D. Wasnick and Short textbook of anesthesia written by Ajay Yadav. Some data was collected by sources as competitive examination coaching and different notes.

Cardiac arrest during surgery is a critical and potentially life-threatening event that can occur due to a variety of factors. Anesthesiologists play a crucial role in managing the patient's hemodynamic stability and ensuring proper oxygenation and ventilation throughout the surgical procedure. One common cause of cardiac arrest during surgery is anesthesia-related complications, such as medication overdose or adverse reactions. Anesthesia can affect the cardiovascular system by decreasing myocardial contractility, causing vasodilation, and altering the conduction system of the heart. These effects can lead to arrhythmias, hypotension, and ultimately cardiac arrest if not promptly recognized and managed. Other factors that can contribute to cardiac arrest during surgery include underlying cardiac conditions, electrolyte imbalances, hypovolemia, and surgical stress. Patients with pre-existing heart disease, such as coronary artery disease or heart failure, are at higher risk for peri-operative cardiac events. Additionally, inadequate fluid resuscitation, blood loss, and prolonged surgical times can exacerbate hemodynamic instability and increase the risk of cardiac arrest. In the event of cardiac arrest during surgery, immediate action is essential to improve outcomes. The American Heart Association's Advanced Cardiac Life Support (ACLS) guidelines provide a systematic approach to resuscitation, including chest compressions, defibrillation, airway management, and administration of medications. Anesthesiologists are trained to lead resuscitation efforts and coordinate the team's response to optimize patient outcomes.

Therefore, cardiac arrest during surgery is a rare but serious complication that requires prompt recognition and intervention. Anesthesiologists play a critical role in preventing and managing peri-operative cardiac events by closely monitoring the patient's vital signs, optimizing hemodynamic stability, and responding quickly to any signs of deterioration. Through effective teamwork and adherence to established protocols, the risk of cardiac arrest during surgery can be minimized, ultimately improving patient safety and outcomes.