

## 講師

Wataru Takayama

## 授課主題

Anesthetic Management and Key Considerations for Open Repair of  
Thoracoabdominal Aortic Aneurysms

## 摘要

### Background and Objectives

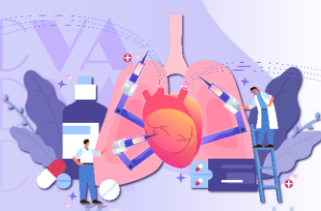
As an anesthesiologist who has had the opportunity to manage numerous cases at Kawasaki Saiwai Hospital, I would like to share practical knowledge and expertise in anesthetic management for thoracoabdominal aortic aneurysm surgery. Rather than presenting textbook knowledge, I emphasize "meaningful knowledge relay" in actual clinical practice, aiming to deepen true understanding that can be conveyed to others. Our hospital performs numerous aortic surgeries annually, and I would like to discuss specific management methods and considerations based on these experiences. This serves as a learning opportunity for ourselves as well, providing a chance for professional development.

Today, I will address the following themes:

# Practical approaches to intraoperative fluid management, # Collaboration with perfusionists during left heart bypass (LHB), # One-lung ventilation (OLV) and nitric oxide (NO) use, # Deep hypothermic circulatory arrest (DHCA), # Other management considerations

### Key Management Points

We prioritize the "balance between maintaining organ perfusion and preventing complications from excessive fluid administration" in intraoperative fluid management. Thoracoabdominal aortic aneurysm patients typically present with high vascular resistance, blood concentration tendencies, good cardiac contractility, but often coexisting coronary artery disease. For such patients, we conduct multifaceted evaluations of various indicators and implement anticipatory interventions. In left heart bypass (LHB), close collaboration



between anesthesiologists and perfusionists is crucial, and we recommend creating an environment that facilitates management for both perfusionists and surgeons. In one-lung ventilation (OLV), precision and management of ventilation-perfusion balance are paramount. For patients with difficult balance management, we optimize pulmonary vascular resistance reduction and oxygenation through selective nitric oxide (NO) administration. When LHB cannot be utilized, deep hypothermic circulatory arrest (DHCA) management becomes necessary. In such cases, we practice brain and organ protection through appropriate cooling and rewarming rates combined with neuroprotective agents.

For spinal cord ischemia prevention, we routinely perform fluoroscopy-guided cerebrospinal fluid drainage (CSFD) with clearly defined implementation criteria (PT-INR <1.5, APTT <40, platelet count >100,000, etc.) and discontinuation and contraindication criteria. For postoperative pain management, we have standardized the retro-laminar block as an effective and easily implementable technique, administering 0.375% ropivacaine 10mL centered on the corresponding spinal levels across three vertebrae.

## Lecture Message

True understanding through "meaningful knowledge relay" leads to safe and effective anesthetic management. This presentation is not a one-way message. We hope to utilize this exchange opportunity as a platform for mutual discussion. While sharing our experiences, we would greatly appreciate learning about the approaches and innovations of our Taiwanese colleagues.