Advanced Hemodynamic Monitoring

Faculty
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Introduction
This comprehensive program is designed to enhance your knowledge and skills in the field of hemodynamic monitoring, focusing on the unique challenges and considerations in cardiac patients undergoing non-cardiac procedures. Over the course of three days, we will delve into various aspects of hemodynamic management, goal-directed therapy, and the predictiveness of perioperative hypotension.

Day 1 will lay the foundation by exploring the importance of hemodynamic stability in cardiac patients during non-cardiac surgery. We will discuss the different monitoring techniques used in this setting and examine the specific considerations and challenges that arise when monitoring cardiac patients in non-cardiac procedures. Through case studies and real-life examples, you will gain a deeper understanding of the complexities involved.

Day 2 will shift the focus towards goal-directed therapy (GDT) and hemodynamic optimization. We will explore the principles and evidence supporting the use of GDT in perioperative care and its benefits in optimizing hemodynamic parameters. You will learn about the monitoring tools and techniques used for implementing GDT, as well as the interpretation of hemodynamic data for effective decision-making. Through interactive exercises and case discussions, you will have the opportunity to apply GDT protocols and tackle practical challenges.

On Day 3, we will specifically address hemodynamic monitoring in cardiac and transplant surgery and the predictiveness of perioperative hypotension. You will gain insights into the unique considerations and monitoring techniques specific to cardiac surgical patients. We will delve into the definition, causes, and implications of perioperative hypotension, as well as predictive models and risk factors associated with this condition. Through case-based discussions, practical exercises, and simulation scenarios, you will develop strategies for optimizing hemodynamic stability during cardiac and transplant surgery.

Throughout this masterclass course, we aim to provide a comprehensive understanding of advanced hemodynamic monitoring in non-cardiac surgery. The program combines theoretical knowledge, interactive discussions, and practical hands-on training to equip you with the skills necessary to navigate complex hemodynamic scenarios effectively.
We encourage active participation, questions, and discussions to foster a dynamic learning environment. By the end of this course, you will have the confidence and expertise to apply advanced hemodynamic monitoring techniques, implement goal-directed therapy, and mitigate the risks associated with perioperative hypotension.

We hope you find this Advanced Course enriching, informative, and transformative in your clinical practice. Let's embark on this journey together to enhance our understanding and mastery of advanced hemodynamic monitoring in non-cardiac surgery.

**Basic Organization and course outline**

**Date:** 3-5 November 2023  
**Time:** Morning time (9:00 am – 12:00 pm)  
**Participants:** 12 / session (6 per station)

**Day 1 November 3rd 2023 (Dr Alaa Salama)**

- (09:00-09:30) Review of Cardiovascular Physiology (30 min).
- (09:30-10:00) Intraoperative Hypotension: do we need to care (30 min).
- (10:00-10:15) Break
- (10:15-11:00) Hemodynamic Monitoring: Methods and Rational (45 min).
- (11:00-12:00) Hands on session on the Monitoring methods and equipment (60 min).

**Day 2 November 4th 2023 (Dr Alaa Salama)**

- (09:00-09:30) Basics of Echocardiography (30 min)
- (09:30-10:00) How to implement Echocardiography (30 min)
- (10:00-10:15) Break
- (10:15-11:00) Overview and Evidence of GDT (45 min)
- (11:00-12:00) Workshop on implementing GDT in clinical practice (60 min).

**Day 3 November 5th 2023 (Dr Arun Kumar)**

- (09:00-09:30) Hemodynamic management in cardiac and transplant surgery (30min)
- (09:30-10:00) Predicting perioperative hypotension (30min)
- (10:00-10:15) Break
- (10:15-11:00) To Swan or not- Is Pulmonary Artery catheterisation a lost art?
- (11:00-12:00) Perioperative hypotension in cardiac and transplant surgery: Case based discussion (60 min).
Conclusion

By incorporating these learnings into your practice, you will be able to provide optimal care for cardiac patients undergoing non-cardiac surgery. You will be equipped to identify and address hemodynamic challenges, implement goal-directed therapy, and mitigate perioperative risks, thereby improving patient outcomes and safety.

Remember, the journey does not end here. Continuously update your knowledge, stay abreast of emerging research and technology, and engage in ongoing professional development to further refine your skills in advanced hemodynamic monitoring.