### **MANAGEMENT & PRACTICE**

VOLUME 17 - ISSUE 2 - SUMMER 2017

# **Cardiac** Arrest

Cardiac Arrest Management, J. Nolan

Prehospital Care for Cardiac Arrest: How to Improve Outcome, S. Schmidbauer, H. Friberg

Extracorporeal Cardiopulmonary Resuscitation: Who Could Benefit? *M.W. Dünser, D. Dankl* 

Targeted Therapeutic Mild Hypercapnia After Cardiac Arrest, G.M. Eastwood, R. Bellomo

Prognostication Following Out-of-Hospital Cardiac Arrest, M. Farag, S. Patil

Resuscitation in Resource-Poor Settings: A Southern Africa Experience, D. Kloeck, P. Meaney, W. Kloeck

Why You Should Always Debrief Your Resuscitations, H. van Schuppen

### **PLUS**

For personal and private use only. Reproduction must be permitted by the

Airway Pressure Release Ventilation: What's Good About It? B. O'Gara, D. Talmor

High Altitude Research and its Relevance to Critical Illness, D. Martin, H. McKenna

How to Run Successful Rounds in the Intensive Care Unit, K. L. Nugent, C.M. Coopersmith

From Independent Attorney to

Critically Ill Patient: How Acute Respiratory Distress Syndrome Changed My Life in a Split Second, *E. Rubin* 

Anaesthesiology Trainees: We Are Also Intensivists! *M. Ștefan, L. Văleanu, D. Sobreira Fernandes* 

Standardised, Hospital-Wide Airway Trolleys, *J. Gatward* 

Five Reasons Why Value-Based

Healthcare is Beneficial, M. Fakkert, F. van Eeenennaam, V. Wiersma

Reaching the Heights of Respiratory Physiology, *J. West* 

Evidenced-based ICU Organisation, J. Kahn

Intensive Care in Tunisia, L. Ouanes-Besbes, M. Ferjani, F. Abroug





# ersonal and private use only. Reproduction must be permitted by the copyright holder. Email to copyright@mindbyte.eu

# Peri-Operative Oxygenation: Novel Strategies to Optimize Oxygenation and Oxygen Delivery (DO2)



Room 4, PALEXPO Congress Center Geneva, Location:

Geneva, Switzerland

Date and Time: Sunday June 4th • 12:15 - 13:45

Lunch will be provided

**Chairperson: Prof. Jean-Louis Vincent** 

Please register at www.masimo.com/thefuture



### Presenters



The Importance of Individualized Oxygen Therapy: Harmful Effects of Hyperoxia in Postcardiac Arrest, Sepsis, Traumatic Brain Injury, or Stroke

Jean-Louis Vincent, MD, PhD

Professor of Intensive Care Medicine (Université Libre de Bruxelles) Department of Intensive Care, Erasme University Hospital President, World Federation of Intensive and Critical Care Societies (WFSICCM) Brussels, Belaium



After All, Brain Oxygenation Is What Really Matters

Basil Matta, BA, BAO, BCh, MB, FRCA, FFICM Divisional Director, MSK. Digestive Diseases, Major Trauma and Perioperative Care Medicine Clinical Lead - Cambridge University Hospitals Trust Consultant, Anaesthesia and Critical Care Associate Lecturer, University of Cambridge



Patient Customized Anaesthesia Care - Optimizing Blood, Oxygen and Fluids; Friends or Foes?

Aryeh Shander, MD, FCCM, FCCP Chief Department of Anesthesiology Pain Management and Hyperbaric Medicine Englewood Hospital and Medical Center Clinical Professor of Anesthesiology, Mount Sinai School of Medicine Mount Sinai Hospital, New York



Detecting Dilutional Anemia: Why and How?

Azriel Perel, MD

Cambridge, UK

Professor of Anesthesiology and Intensive Care Sheba Medical Center, Tel Aviv University Tel Aviv, Israel



The Future of Noninvasive Monitoring - Beyond Pulse Oximetry: Oxygen Reserve Index (ORi™), Validation and Application of a New Variable

Thomas W.L. Scheeren, мд, РЬД

Professor of Anaesthesiology, Head Cardiothoracic Anaesthesia Department of Anaesthesiology, University Medical Center Groningen Groningen, The Netherlands







Sunday 4 June 2017, 12:15-13:45

## Room X, PalExpo, Geneva, Switzerland

CSL Behring-sponsored satellite symposium at Euroanaesthesia 2017

### **Programme**

Chairs: Donat R. Spahn (Switzerland) and Marco Ranucci (Italy)

12:15 Chairs' welcome

Treatment of bleeding patients during therapy with non-vitamin K antagonists

Results from the French registry

Pierre Albaladejo (France)

Fibrinogen concentrate in elective complex cardiac surgery: a monocentric trial

Arno Nierich (The Netherlands)

The Fibcon study: Fibrinogen concentrate in paediatric cardiac surgery (a randomised cohort trial)

Shane Tibby (UK)

Treatment of trauma-induced coagulopathy with factor concentrates versus treatment with fresh frozen plasma

Petra Innerhofer (Austria)

Closing remarks

13:45 Close of symposium



### ICU MANAGEMENT & PRACTICE

# **Cardiac Arrest**

he "chain of survival" metaphor for improving outcomes from sudden cardiac arrest (CA) was first coined in the 1980s. Since adopted by the American Heart Association and the International Liaison Committee on Resuscitation amongst others, it is a useful tool to concentrate efforts on how to optimise every link in the chain to improve survival and neurologically intact outcomes for CA patients. Mortality from out-of-hospital cardiac arrest (and indeed in-hospital) is still stubbornly high. Can we do better? At the "macro" level, initiatives to train lay people to perform cardiopulmonary resuscitation (CPR) will improve bystander resuscitation rates. Technology, such as apps to help bystanders locate automated external defibrillators, will also play a part. Organisational efforts, such as the "shock lab" at my own institution, bring together teams of emergency and intensive care medicine to optimise care. In other countries, intensivists go into the field to provide prehospital care.

In our cover story we consider several elements in the chain of survival.

Jerry Nolan summarises the advances made in improving the outcomes of cardiac arrest over the last 10-15 years—no longer is treatment an "exercise in futility". Next, Simon Schmidbauer and Hans Friberg outline the factors for improving prehospital care, namely the roles of first responders, emergency medical services and the importance of termination of resuscitation rules.

Martin Dünser and Daniel Dankl examine the pragmatic criteria for extracorporeal cardiopulmonary resuscitation, and note that it should only be used in carefully selected patients. Next, Glenn Eastwood and Rinaldo Bellomo, who are leading the Targeted Therapeutic Mild Hypercapnia After Resuscitated Cardiac Arrest (TAME) trial, explain the background, the rationale and the trial design. A poor neurologic outcome unfortunately is noted in a high percentage of survivors. Mena Farag and Shashank Patil review the latest evidence on prognostication and key principles in following a prognostication strategy.

David Kloeck, Peter Meaney and Walter Kloeck observe that international recommendations on CA often require adaptation due to cost or therapy. Particularly in South Africa, resuscitation training, adapted to local conditions, has increasingly been made available. Last, Hans van Schuppen makes the case for debriefing after resuscitation.

While airway pressure release ventilation has been available on ventilators for some time, evidence for its use in patients with ARDS is still lacking accumulated evidence from randomised controlled trials. In the Matrix section, Brian O'Gara and Daniel Talmor summarise the benefits and

limitations of the technique and review the evidence supporting its use. Next, Daniel Martin and Helen McKenna describe how high altitude research is relevant to critical illness.

In the Management section Katherine Nugent and Craig Coopersmith begin by explaining the core principles of rounds, as well as who should be included, how to structure, how to optimise communication and accommodate the needs of learners. "Rounds should be enjoyable—and even fun—if at all possible", they conclude.

We are pleased to include a patient's perspective in this issue. Eileen Rubin writes about her experiences of critical illness, its effect on her and her family, and her motivation to co-found the ARDS Foundation.

The European Society of Anaesthesiology (ESA) has an active network for trainees. Three trainees, Mihai Ştefan, Liana Văleanu and Diogo Sobreira Fernandes, Chair of the ESA Trainee Committee, write about the goals of the network. A recent survey highlighted the heterogeneity of anaesthesiology training in Europe, as well as a keen interest in intensive care medicine.

What does your difficult airway trolley look like? Jonathan Gatward describes the trolley in use at Royal North Shore Hospital in Sydney, Australia, a design standardised across the emergency and operating departments and the ICU. Last, our sister journal, *HealthManagement.org The Journal*, recently published a cover story on value-based healthcare. Michelle Fakkert, Fred Van Eenennaam, Vincent Wiersma explain five points that show how VBHC can provide a common language for all stakeholders in healthcare.

This issue we have the bonus of two interviews with experts. John West is often described as the guru of hypoxia. We are delighted to bring you an interview, in which he talks about his discoveries, his serendipitous career, the promise of oxygen conditioning and why the avian lung is better than the human lung.

Research into organisational aspects of intensive care has yielded many important insights into improving outcomes. Jeremy Kahn is a leader in this field and shares his thoughts next.

We visit Tunisia for our Country Focus. Lamia Ouanes-Besbes, Mustapha Ferjani and Fekri Abroug write frankly about the issues facing the intensive care specialty in their country and outside, as there is a brain drain of specialists.

Intensivists and anaesthesiologists gather at Euroanaesthesia in Geneva this month, and will be joined by the ICU Management & Practice team. We hope to meet you there!

As always, if you would like to get in touch, please email JLVincent@icu-management.org

Jean-Louis Vincent



Jean-Louis Vincent

Editor-in-Chief ICU Management & Practice

Professor Department of Intensive Care Erasme Hospital / Free University of Brussels Brussels, Belgium

JLVincent@icu-management.org