#### Fri. Mar 1, 2019

#### 第2会場

Meet the Experts

#### [ME1] Meet the Experts1

座長:西村 匡司(日本集中治療医学会 理事長/徳島県立中央病院) 4:55 PM - 5:45 PM 第2会場 (国立京都国際会館2F Room A)

[ME1] Noninvasive ventilation in hypoxemic acute respiratory failure

Massimo Antonelli (Catholic University of the Sacred Heart, Italy)

#### 第5会場

Meet the Experts

[ME2] Meet the Experts2

Non-pharmacological management of delirium in the ICU: Understanding the latest evidence

座長:曷川 元(一般社団法人 日本離床研究会学術研究部), 西田修(藤田医科大学医学部 麻酔・侵襲制御医学講座) コメンテーター:Celine Gelinas(McGill University, Canada) 5:40 PM - 6:30 PM 第5会場 (国立京都国際会館1F Room D)

[ME2] Non-pharmacological management of delirium in the ICU: Understanding the latest evidence Dale M. Needham (Johns Hopkins University, USA) Meet the Experts

### [ME1] Meet the Experts1

Noninvasive ventilation in hypoxemic acute respiratory failure 座長:西村 匡司(日本集中治療医学会 理事長/徳島県立中央病院) Fri. Mar 1, 2019 4:55 PM - 5:45 PM 第2会場 (国立京都国際会館2F Room A) 共催:Intersurgical Ltd. /日本メディカルネクスト株式会社

#### [ME1] Noninvasive ventilation in hypoxemic acute respiratory failure

Massimo Antonelli (Catholic University of the Sacred Heart, Italy)

(Fri. Mar 1, 2019 4:55 PM - 5:45 PM 第2会場)

## [ME1] Noninvasive ventilation in hypoxemic acute respiratory failure

Massimo Antonelli (Catholic University of the Sacred Heart, Italy)

【同時通訳付き】

MASSIMO ANTONELLI MD, CV

Born in Rome 23 February 1957, Nationality: Italian Sex: Male, Married, one son.

Professor of Intensive Care and Anesthesiology at the "Università Cattolica del Sacro Cuore" Rome Italy since November 1999.

Director of the Dept. of Anesthesiology and Intensive Care and Emergency Medicine and of the General ICU, Postoperative ICU and Neurosurgical ICU of the Fondazione Policlinico Universitario A.Gemelli IRCCS. Director of the School of Specialty in Anesthesiology and Intensive Care Medicine.

School of Medicine at La Sapienza University from 1976 to 1981. Graduated in Medicine and Surgery with full qualification as a Medical doctor cum laude in 1981.

During 1983-984 visiting scholar at the Rayne Institute of the School of Medicine, University College of London and at the University of Berkeley, California, USA, Membrane Bioenergetics Group, directed by Prof. Lester Packer

Full qualification as specialist in Anesthesiology and Intensive Care Medicine in 1984.

In 1991 working period at the Reanimation Polyvalent, Cochin-Port Royal University Hospital, directed by prof J.F. Dhainaut

Assistant Professor of Anesthesiology and Intensive Care Medicine at the "Policlinico Umberto I-Università La Sapienza" from 1985 to 1999.

Editor in Chief of "Intensive Care Medicine" from 2007 to 2013. Associate Editor of the same Journal from 2000 to 2007.

Awarded with the Society Medal of the ESICM in the 2013.

Past President of the Italian Society of Anesthesiology and Intensive Care Medicine (SIAARTI). President of the European Society of Intensive Care Medicine (ESICM) 2016-2018

Scientific fields of interest and research: Noninvasive Ventilation, Mechanical Ventilation, ARDS, Shock, sepsis and infections.

Involved as Principal Investigator in many phase II-III clinical and international trials in ICU patients

Author of more than 300 papers with more than 24,384 citations, H index 74. The majority of these scientific publications are on several aspects of Noninvasive Ventilation, ARDS, Shock and sepsis. Invited lecturer or chairman in more than 300 International Meetings.

Non-invasive positive pressure ventilation (NIV) has been shown to be safe and effective as first line treatment in patients with acute hypercapnic respiratory failure and acute cardiogenic pulmonary oedema. Despite some data suggest NIV may also avoid intubation in heterogeneous categories of patients with hypoxemic acute respiratory failure (HARF), its safety and efficacy in such a context is still debated, given the high failure rate and the possible detrimental effect on the clinical outcome.

As patients' comfort is crucial for NIV success, over the last years a great effort has been made to optimize

NIV tolerability. Different interfaces are available for noninvasive ventilation: in spite of face masks being more commonly used, helmet has been shown to improve patients' comfort, allowing patients' interaction, speech, feeding and not limiting cough. Nonetheless, skin necrosis, gastric distension, or eye irritation are seldom observed during helmet NIV, while may be consequences of long-term treatments with face masks. Moreover, differently from face masks, helmets permit longer-term treatments and allow the setting of higher levels of PEEP without causing air leaks or patient-ventilator asynchrony; this aspect may be crucial when treating severely hypoxemic patients with acute respiratory failure and the acute respiratory distress syndrome (ARDS). Interestingly, higher PEEP during fully controlled mechanical ventilation in the early phase of the disease improves mortality in ARDS patients and raising evidence indicates that it may exert beneficial effects also if spontaneous breathing is maintained. In this sense, a recent randomized controlled trial comparing continuous NIV delivered with helmet or face-mask in patients with ARDS showed a lower intubation rate and a lower 90-day mortality in patients in the helmet group who, accordingly, underwent treatments with higher PEEP and lower FiO<sub>2</sub>. In this study, however, pressure support NIV and low-flowcontinuous positive airway pressure (CPAP) were indifferently used in patients randomized to helmet group, despite their mechanisms of action, efficacy and potential harmful effects are profoundly different, especially given the high relevance of the driving pressure in such a context.

No study has ever clarified whether first-line treatment with helmet NIV as compared to other interfaces or techniques may yield a significant benefit to critically ill patients with respiratory failure. In order to establish whether the application of NIV in hypoxemic patients through the helmet might be beneficial without arm in comparison to other interfaces further randomized controlled studies are needed

Meet the Experts

## [ME2] Meet the Experts2

Non-pharmacological management of delirium in the ICU:

## Understanding the latest evidence

座長:曷川 元(一般社団法人 日本離床研究会学術研究部), 西田 修(藤田医科大学医学部 麻酔・侵襲制御医学講座) コメンテーター:Celine Gelinas(McGill University, Canada)

Fri. Mar 1, 2019 5:40 PM - 6:30 PM 第5会場 (国立京都国際会館1F Room D)

# [ME2] Non-pharmacological management of delirium in the ICU: Understanding the latest evidence

Dale M. Needham (Johns Hopkins University, USA)

(Fri. Mar 1, 2019 5:40 PM - 6:30 PM 第5会場)

## [ME2] Non-pharmacological management of delirium in the ICU: Understanding the latest evidence

Dale M. Needham (Johns Hopkins University, USA) 【 同時通訳付き】 【 ARS(視聴者参加型アンケートシステム)使用】

Dr. Needham is Professor of Pulmonary and Critical Care Medicine, and of Physical Medicine and Rehabilitation at the Johns Hopkins University in Baltimore, USA. He is Director of the "Outcomes After Critical Illness and Surgery" (OACIS) Research Group and core faculty with the Armstrong Institute for Patient Safety and Quality, both at Johns Hopkins. From a clinical perspective, he is an attending physician in the medical intensive care unit at Johns Hopkins Hospital and Medical Director of the Johns Hopkins Critical Care Physical Medicine and Rehabilitation program.

Dr. Needham received his MD degree from McMaster University in Hamilton, Canada, and completed both his residency in internal medicine and his fellowship in critical care medicine at the University of Toronto. He obtained his PhD in Clinical Investigation from the Bloomberg School of Public Health at Johns Hopkins University. Notably, prior to his medical training, he completed Bachelor and Master degrees in Accounting and practiced in a large international accounting firm, with a focus in the health care field.

Dr. Needham is Principal Investigator on a number of NIH research grants and has authored more than 350 publications. His research interests include evaluating and improving ICU patients' long-term physical, cognitive and mental health outcomes, including research in the areas of sedation, delirium, early physical rehabilitation, and knowledge translation and quality improvement.

Delirium is common in critically ill patients and associated with long-lasting effects after hospital discharge.

Multiple pharmacological strategies have been suggested for the management of delirium in the ICU, but without consistent evidence of benefit. The 2018 Society of Critical Care Medicine (SCCM) clinical practice guidelines on Pain, Agitation/Sedation, Delirium, Immobility and Sleep disruption (PADIS) suggest not routinely using pharmacological interventions for the prevention or treatment of delirium.

However, based on the results of multiple recent studies, the 2018 SCCM PADIS guidelines suggest multi-component, non-pharmacological interventions for the management of delirium in the ICU. Such interventions focus on reducing modifiable risk factors for delirium, including providing cognitive stimulation, optimizing sleep, promoting mobility, and reducing hearing, and vision impairments. Moreover, the ABCDEF bundle, including family engagement, may reduce delirium in the ICU.

This presentation will focus on the latest recommendations and evidence regarding multi-component, non-pharmacological strategies for the management of delirium in critically ill patients.

Free access to the full-text version of four publications related to the 2018 SCCM PADIS guidelines and information about the ABCDEF bundle is available at these web pages:

http://www.sccm.org/ICULiberation/Guidelines

http://www.sccm.org/ICULiberation/ABCDEF-Bundles