Fri. Mar 1, 2019

第2会場

海外招請講演

[IL(E)1] 海外招請講演1

座長:布宮 伸(自治医科大学医学部麻酔科学・集中治療医学講座集中治療医学部門)

9:00 AM - 9:50 AM　第2会場 (国立京都国際会館2F Room A)

[IL(E)1] New sedation and delirium recommendations from the 2018 Society of Critical Care Medicine PADIS Guidelines

Dale M. Needham （Johns Hopkins University, USA）

海外招請講演

[IL(E)2] 海外招請講演2

座長:藤野 裕士(大阪大学医学部附属病院集中治療部)

3:05 PM - 3:55 PM　第2会場 (国立京都国際会館2F Room A)

[IL(E)2] What went wrong with ART, EPIVENT2 and PReVENT: Are the recent trials on lung protection contradicting lung physiology?

Marcelo Britto Passos Amato （University of São Paulo Heart Institute（INCOR）, Brazil）

海外招請講演

[IL(E)3] 海外招請講演3

座長:桑平 一郎(東海大学医学部付属東京病院呼吸器内科)

4:00 PM - 4:50 PM　第2会場 (国立京都国際会館2F Room A)

[IL(E)3] Electrical impedance tomography: The past, the present and the future

Inéz Frerichs （University Medical Centre Schleswig-Holstein, Germany）

第5会場

海外招請講演

[IL(E)4] 海外招請講演4

座長:森松 博史(岡山大学病院麻酔科蘇生科)

9:00 AM - 10:00 AM　第5会場 (国立京都国際会館1F Room D)

[IL(E)4-1] Update from TSCCM: Current status of rapid response system in Thailand

Thammasak Thawitsri （Chulalongkorn Univeraity, Thailand）

[IL(E)4-2] Update from TSCCM: Vasopressors in sepsis

Chairat Permpikul （Siriraj Hospital, Thailand）

海外招請講演

[IL(E)5] 海外招請講演5

座長:丸藤 哲(医療法人 徳洲会 札幌東徳洲会病院救急センター)

10:05 AM - 10:55 AM　第5会場 (国立京都国際会館1F Room D)

[IL(E)5] Tranexamic acid in life threatening bleeding

Ian Roberts （London School of Hygiene &Tropical Medicine, UK）

海外招請講演

[IL(E)6] 海外招請講演6

座長:中川 聡(国立研究開発法人国立成育医療研究センター集中治療科)

11:00 AM - 11:50 AM　第5会場 (国立京都国際会館1F Room D)

[IL(E)6] Moral distress: I know what to do but I can’ t !!!

Daniel Garros （University of Alberta Stollery Children’ s Hospital, Canada）

海外招請講演

[IL(E)7] 海外招請講演7

座長:坂本 哲也(帝京大学医学部救急医学講座)

2:00 PM - 2:50 PM　第5会場 (国立京都国際会館1F Room D)

[IL(E)7] The 50th anniversary of ARDS: What has been changed?

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

海外招請講演

[IL(E)8] 海外招請講演8

座長:江木 盛時(神戸大学医学部附属病院麻酔科)

2:55 PM - 3:45 PM　第5会場 (国立京都国際会館1F Room D)

[IL(E)8] Acute glycemic control in patients with diabetes

Adam Deane （Royal Melbourne Hospital, University of Melbourne, Australia）

海外招請講演

[IL(E)9] 海外招請講演9

座長:布宮 伸(自治医科大学医学部麻酔科学・集中治療医学講座集中治療医学部門)

3:50 PM - 4:40 PM　第5会場 (国立京都国際会館1F Room D)

[IL(E)9] Pain management in critical care; why, whom, and how? -The role of CPOT

Celine Gelinas （McGill University, Canada）

海外招請講演

[IL(E)10] 海外招請講演10

座長:川前 金幸(国立大学法人山形大学医学部附属病院麻酔科)

4:45 PM - 5:35 PM　第5会場 (国立京都国際会館1F Room D)

[IL(E)10] A multidisciplinary rehabilitation approach to facilitating early engagement and mobilization in the ICUs at Stanford Medical Center

Shohei Takatani （Stanford Health Care, USA）

Sat. Mar 2, 2019

第2会場

海外招請講演

[IL(E)11] 海外招請講演11
座長:黒田 泰弘(香川大学医学部附属病院救命救急センター)
8:45 AM - 9:35 AM 第2会場 (国立京都国際会館2F Room A)

[IL(E)11] Neurocritical care 2019: Recent advances and future frontiers
Stephan A. Mayer （Henry Ford Health System and the Mount Sinai Health System, USA）

海外招請講演

[IL(E)12] 海外招請講演12
座長:射場 敏明(順天堂大学医学部附属 順天堂医院救急・災害医学)
9:40 AM - 10:30 AM 第2会場 (国立京都国際会館2F Room A)

[IL(E)12] Sepsis: New insights into pathophysiology and a sneak preview to future therapy
Thomas van der Poll （Amsterdam University Medical Centers, University of Amsterdam, Netherlands）

海外招請講演

[IL(E)13] 海外招請講演13
座長:佐藤 直樹(日本医科大学武蔵小杉病院内科・循環器内科・集中治療室)
10:35 AM - 11:25 AM 第2会場 (国立京都国際会館2F Room A)

[IL(E)13] High sensitivity cardiac troponin assays: How they are being used across the world for the evaluation of patients with suspected acute coronary syndromes ― Possible implications for Japan
Richard Michael Nowak （Henry Ford Hospital, USA）

海外招請講演

[IL(E)14] 海外招請講演14
座長:林 淑朗(医療法人鉄蕉会亀田総合病院集中治療科)
2:00 PM - 2:50 PM 第2会場 (国立京都国際会館2F Room A)

[IL(E)14] An update of the subtleties of infection management in the ICU
Jeffrey Lipman （The University of Queensland Centre for Clinical Research, Australia）

海外招請講演

[IL(E)15] 海外招請講演15
座長:川前 金幸(国立大学法人山形大学医学部附属病院麻酔科)
2:55 PM - 3:45 PM 第2会場 (国立京都国際会館2F Room A)

[IL(E)15] Severe viral pneumonia: Significant?
Younsuck Koh （Asan Medical Center, University of Ulsan, Korea）

海外招請講演

[IL(E)16] 海外招請講演16
座長:三高 千恵子(順天堂大学大学院 麻酔科学)
3:50 PM - 4:40 PM 第2会場 (国立京都国際会館2F Room A)

[IL(E)16] Pick your syndrome: PICS or PIICS
Heatherlee Bailey （President Elect of SCCM）

第5会場

海外招請講演

[IL(E)17] 海外招請講演17
座長:稲葉 英夫(金沢大学附属病院救命センター)
8:45 AM - 9:35 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)17] Volume management in ICU patients
Sung Jin Hong （Catholic University of Korea Yeouido St. Mary's Hospital, Korea）

海外招請講演

[IL(E)18] 海外招請講演18
座長:丸藤 哲(医療法人 徳洲会 札幌東徳洲会病院救急センター)
9:40 AM - 10:30 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)18] End-of-life care, decision making and palliative care
Jozef Kesecioglu （University Medical Center Utrecht, Netherlands）

第6会場

海外招請講演

[IL(E)19] 海外招請講演19（日本語）
座長:森崎 浩(慶應義塾大学医学部麻酔学教室)
4:05 PM - 4:55 PM 第6会場 (国立京都国際会館1F スワン)

[IL(E)19] Extracellular vesicles: ARDSと敗血症の新しいターゲット
高田 正雄 （Imperial College London, UK）

Sun. Mar 3, 2019

第5会場

海外招請講演

[IL(E)20] 海外招請講演20

座長:佐藤 直樹(日本医科大学武蔵小杉病院内科・循環器内科・集中治療室)

8:45 AM - 9:35 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)20] Congestion in acute heart failure

Alexandre Mebazaa （University Hospitals Saint-Louis &Lariboisière, University of Paris, France）

海外招請講演

[IL(E)21] 海外招請講演21

座長:大嶽 浩司(昭和大学医学部麻酔科学講座)

11:15 AM - 12:05 PM 第5会場 (国立京都国際会館1F Room D)

[IL(E)21] The challenge of medical artificial intelligence

Leo Anthony Celi （MIT Laboratory for Computational Physiology／Beth Israel Deaconess Medical Center, USA）

海外招請講演

[IL(E)1] 海外招請講演1

座長:布宮 伸(自治医科大学医学部麻酔科学・集中治療医学講座集中治療医学部門)

Fri. Mar 1, 2019 9:00 AM - 9:50 AM 第2会場 (国立京都国際会館2F Room A)

[IL(E)1] New sedation and delirium recommendations from the 2018 Society of Critical Care Medicine PADIS Guidelines

Dale M. Needham （Johns Hopkins University, USA）

(Fri. Mar 1, 2019 9:00 AM - 9:50 AM 第2会場)

[IL(E)1] New sedation and delirium recommendations from the 2018 Society of Critical Care Medicine PADIS Guidelines

Dale M. Needham （Johns Hopkins University, USA）

【 同時通訳付き】

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.

Sedative medications are widely used in the management of critically ill adults, but these patients are prone to many adverse effects from sedatives. Clinicians must assess specific indications for the use of sedative medications and perform frequent assessments of pain, sedation, and delirium status using reliable and validated instruments, as recommended in the 2013 Society of Critical Care Medicine (SCCM) Pain, Agitation and Delirium (PAD) guidelines (Crit Care Med 2013; 41:263–306).

Delirium is a particularly common and important complication associated with the use of sedatives. Delirium has a significant burden on patients, families, and health systems, with negative short and long-term sequelae. Multiple pharmacological and non-pharmacological strategies have been considered to prevent or treat delirium in critically ill patients.

In the 2013 SCCM PAD guidelines, targeting light sedation and minimizing the use of benzodiazepines were suggested as means of improving the short-term outcomes of critically ill adults. Given the important effects of sedation on patient outcomes after discharge from the intensive care unit, these longer-term outcomes were an important focus of the sedation and delirium recommendations in the recent 2018 SCCM Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption (PADIS) guidelines.

The 2018 PADIS guidelines are based on a rigorous and innovative implementation of the Grading of Recommendation Assessment, Development and Evaluation (GRADE) methodology, and included participation of ICU survivors throughout the entire guideline development process. This presentation will highlight selected sedation and delirium recommendations from the 2018 PADIS guidelines, including the related evidence and recommendations for future research in the field.

Free access to the full-text of four publications related to the 2018 SCCM PADIS guideline is available at this webpage:
http://www.sccm.org/ICULiberation/Guidelines

海外招請講演

[IL(E)2] 海外招請講演2

座長:藤野 裕士(大阪大学医学部附属病院集中治療部)

Fri. Mar 1, 2019 3:05 PM - 3:55 PM 第2会場 (国立京都国際会館2F Room A)

共催:コヴィディエン ジャパン株式会社

[IL(E)2] What went wrong with ART, EPIVENT2 and PReVENT: Are the recent trials on lung protection contradicting lung physiology?

Marcelo Britto Passos Amato （University of São Paulo Heart Institute（INCOR）, Brazil）

(Fri. Mar 1, 2019 3:05 PM - 3:55 PM 第2会場)

[IL(E)2] What went wrong with ART, EPIVENT2 and PReVENT: Are the recent trials on lung protection contradicting lung physiology?

Marcelo Britto Passos Amato （University of São Paulo Heart Institute（INCOR）, Brazil）

【 同時通訳付き】

He initiated his medical studies in 1980 at the Faculdade de Medicina da Universidade de São Paulo, and graduated in December, 1985.
After graduating, he had a year of training in Internal Medicine and Intensive Care Medicine, as a resident doctor, followed by two years of specialization in Pneumology and Intensive Care Medicine at the Pulmonary Division of the Hospital das Clínicas - Faculdade de Medicina da Universidade de São Paulo.
In 1996 (January) he presented his Doctoral Thesis ("A New Approach to Mechanical Ventilation in ARDS: Effects on Pulmonary Function and Mortality"), finishing with success his doctoral post-graduation. 2
In 1996 he spent 4 months in Minneapolis, working at the Laboratory of Prof. John Marini on a project about pleural pressure measurements during acute lung injury and partial liquid ventilation.
In 1997 he spent 3 months in Rotterdan, working at the Laboratory of Prof. Lachmann on a project about the Open Lung Approach and how to monitor Lung Function.
In 2008 (January) he presented his Thesis for “Livre-Docência”（“Lung Stress during Artifical Ventilation:how to monitor and how to minimize it”), finishing with success and obtaining his professorship at the University of São Paulo, Pulmonary Department.

We will present the results of 3 large multicenter randomized clinical trials about lung protection. The results of the 3 trials combined were disappointing. The ART and EPIVENT2 trials tested PEEP settings based on lung mechanics in ARDS, encompassing more than 1200 patients with moderate/severe disease. The results were surprising, showing either greater harm associated with high PEEP use (ART) or a neutral result (EPIVENT2). Of note, the control group of both trials used much higher PEEP levels than usual, with average levels of 13 and 16 cmH2O, respectively, making the interpretation of results extremely complex. In the ART trial, the harm was especially evident when the patients started assisted ventilation, 4-5 days after entering the trial, and especially so for those in whom Driving Pressures increased after PEEP increments. In this conference, we will provide some mechanistic explanations for the failure, providing also possible solutions and new clinical tools and procedures that should be used in future trials on lung protection. Of note, it is very likely that a large amount of unintended errors happened in both trials. Regarding the PReVENT, the use of a stricter protective tidal volume (6 mL/kg) failed in showing some positive outcome in patients with near normal lungs. The most likely explanation for this finding was the low power of the study, associated also with non-intended consequences of a too restricted tidal volume (breath-staking). In fact, the period of assisted ventilation is now the major problem during mechanical ventilation – how to propose and effective strategy for lung protection, when patients are breathing spontaneously and self-inflicting lung injury?

海外招請講演

[IL(E)3] 海外招請講演3

座長:桑平 一郎(東海大学医学部付属東京病院呼吸器内科)

Fri. Mar 1, 2019 4:00 PM - 4:50 PM 第2会場 (国立京都国際会館2F Room A)

[IL(E)3] Electrical impedance tomography: The past, the present and the future

Inéz Frerichs （University Medical Centre Schleswig-Holstein, Germany）

(Fri. Mar 1, 2019 4:00 PM - 4:50 PM 第2会場)

[IL(E)3] Electrical impedance tomography: The past, the present and the future

Inéz Frerichs （University Medical Centre Schleswig-Holstein, Germany）

【 同時通訳付き】

Prof Frerichs is a graduate of the Comenius University in Bratislava, Slovakia in 1985 (MD), where she completed her PhD in physiology (1991). She held research fellowships in respiratory physiology at the Max Planck Institute for Experimental Medicine, Göttingen (1988-1990), Germany, the Zürich University, Switzerland (1992-1993) and Department of Anaesthesiology, Emergency and Intensive Care Medicine, University of Göttingen as a senior researcher (1993-2004). Currently, she is a Professor of Physiology at the Christian Albrechts University in Kiel, Germany. She is the head of the Electrical impedance tomography (EIT) group at the Department of Anaesthesiology and Intensive Care Medicine at the University Medical Centre Schleswig-Holstein, Campus Kiel. Prof Frerichs has published 143 original articles, 14 reviews, 17 book chapters and 1 book in her career. Although she was active in various research fields, especially related to the respiratory system, her major research focus has been EIT since 1993. She is internationally recognized as one of the leading experts on EIT, since she decisively contributed to the development, validation and implementation of this method in the clinical setting. This is evidenced by the fact that 99 out of the total of her 143 original papers are dedicated to EIT. Prof Frerichs has given 66 invited presentations at national and international meetings. Her research papers are frequently cited by other scientists (h-index: 35, total citations 3617). She is an active member of the International Steering Committee on EIT. She initiated the TREND Chest EIT international consensus group promoting the translation of EIT into clinical practice. She has provided decisive inputs in the publication of the first consensus statement on chest EIT resulting from the collaboration among EIT researchers from Europe, North and South America, Australia and Asia. Thanks to her expertise on EIT, her group has become part of three international research consortia funded by the European Union grant programs.

Electrical impedance tomography (EIT) is a functional imaging method invented already in the early eighties of the last century. Its use in a clinical setting is rather recent but still often limited to clinical studies in neonatal, paediatric and adult intensive care units. EIT generates cross-sectional images (i.e. scans) of the body like all other established medical imaging tomographic techniques (i.e. computed tomography or magnetic resonance imaging). In contrast to these radiological methods, EIT examinations can be performed continuously at the bedside without the need of patient transport to specialized radiological departments and without any exposition to radiation. The maximum scan rate of modern EIT devices is in the range of about 40 to 80 images per second. This very high scan rate allows the imaging of dynamic physiological processes like pulmonary ventilation and perfusion, their pathophysiological changes as well as their instantaneous responses to therapy. This feature of EIT explains the suitability of this method for long-term patient monitoring. Because of its limited spatial resolution, anatomical imaging is not considered to be the primary application of EIT, its strength lies in functional imaging. Chest EIT dominates the clinical use of EIT [1], imaging of other organs than the lungs is very limited. The measuring principle of EIT is based on the repetitive rapid measurement of electrical voltages at the surface of the chest resulting from cyclic applications of very small alternating currents of only a few millivolts. To accomplish this, an array of single electrodes or an electrode belt is placed on the chest circumference. The acquired data is used to calculate the distribution of electrical bioimpedance within the chest which typically is modulated by the instantaneous changes in regional air content. This in turn enables EIT to assess regional lung ventilation and aeration. EIT lung imaging is most frequently used in critically ill mechanically ventilated patients of all age groups. The main benefits of EIT in these patients are 1) the early identification of adverse events like

pneumothorax or tube malposition and 2) the guidance in ventilation therapy. EIT enables the assessment of regional ventilation and aeration during spontaneous breathing, assisted and controlled modes of mechanical ventilation. It also can trace the regional lung behavior in response to ventilation manoeuvres like the quasi-static low-flow inflation and deflation, incremental and decremental positive end-expiratory pressure (PEEP) trial or a step change in airway pressure. Functional EIT images and various EIT parameters continuously derived from the patient examinations enable the visualization of regional ventilation distribution or local changes in end-expiratory lung volume and identification of lung recruitment, atelectasis formation or overdistension. It is expected that this information will allow individual optimisation of ventilation therapy and lung-protective ventilation with the least injurious ventilator settings.

References:

[1] Frerichs et al. Chest electrical impedance tomography examination, data analysis, terminology, clinical use and recommendations: consensus statement of the TRanslational EIT developmeNt stuDy group. Thorax 2017;72:83-93.

海外招請講演

[IL(E)4] 海外招請講演4

座長:森松 博史(岡山大学病院麻酔科蘇生科)

Fri. Mar 1, 2019 9:00 AM - 10:00 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)4-1] Update from TSCCM: Current status of rapid response system in Thailand

Thammasak Thawitsri （Chulalongkorn Univeraity, Thailand）

[IL(E)4-2] Update from TSCCM: Vasopressors in sepsis

Chairat Permpikul （Siriraj Hospital, Thailand）

(Fri. Mar 1, 2019 9:00 AM - 10:00 AM 第5会場)

[IL(E)4-1] Update from TSCCM: Current status of rapid response system in Thailand

Thammasak Thawitsri （Chulalongkorn Univeraity, Thailand）

【 同時通訳付き】

Education:
Doctor of Medicine (M.D.), Chulalongkorn University, 1993
Thai Board of Anesthesiology, Chulalongkorn University, 1999
Thai Board of Critical Care Medicine, Thai Society of Critical Care Medicine, 2006
Master of Science Program in Health Development, Chulalongkorn University, 2016
Current status:
Instructor at Department of Anesthesiology,
King Chulalongkorn Memorial Hospital
Committee of Thai Society of Critical Care Medicine (2011-2020)
Publication:
Thawitsri T, Chittawatanarat K, Chaiwat O, Charuluxananan S, THAI-SICU Study Group. Self-Reporting of Medication Errors in Critically Ill Surgical Patients in the THAI-SICU Study. J Med Assoc Thai. 2016 Nov;99 Suppl 6:S69-S73.
Thawitsri T, Thongdee S, Chokengarmwong N, Kongwibulwut M, Kumwilaisak K,Poonyathawon S, Chatkaew P, Charuluxananan S. Lactate Non-Clearance versus lactate Clearance: A Comparison of Hospital Mortality in High-Risk Surgical Patients. J Med Assoc Thai. 2016 Nov;99 Suppl 6:S201-S208.
Thawitsri T, Chittawatanarat K, Kumwilaisak K, Charuluxananan S, THAI-SICU Study Group. Treatment with Vasoactive Drugs and Outcomes in Surgical Critically Ill Patients: The Results from the THAI-SICU Study. J Med Assoc Thai. 2016 Sep;99 Suppl 6:S83-S90.
Thawitsri T, Chittawatanarat K, Kumwilaisak K, Kongsayreepong S, THAI-SICU Study Group. The Impacts of Surgical Intensive Care Unit Admission Source on Morbidity and Mortality Outcomes: The Results from the THAI-SICU Study. J Med Assoc Thai. 2016 Sep;99 Suppl 6:S15-S22.

The healthcare providers have tried to improve the work on patient safety for many years. In Thailand, we have been announced the first national patient safety goals in 2006. One of the most important goals for patient safety is the responses to the deteriorating patients in hospital. Adverse events can be categorized to be the rapid deteriorating group and the gradually deteriorating group. The rapidly deteriorating patients might be the difficult group to prevent cardiac arrest or sudden death. Although, the gradually deteriorating group has revealed the information that approximately two-third of patients shows the abnormal signs and symptoms within 6-8 hours before the critical events. Abnormal clinical observations associated with an increasing risk of mortality are the decreasing level of consciousness, tachypnea, hypoxia and hypotension. If we analyze all of the vital signs together with some specific clinical parameters, each of the physiological parameters should be allocated a score demonstrated the magnitude of physiological disturbance. After that, we will get the sum of each physiological score, and then turn to be a single number to interpret how risk of the patient conditions. Modified early warning score (MEWS) has been introduced despite limited high quality studies to demonstrate their sensitivity, specificity and usefulness. There are many MEWS used around the world, and Search Out Severity (SOS) score is a MEWS widely used in Thailand. The SOS score 4 is demonstrated to be a cut-off point of trigger threshold to initiate action for worsening adverse events. Anyway, MEWS functions as a monitoring tool for screening the risk patients. Then, when we apply MEWS in the hospital setting, we should couple MEWS with an effective outreach service. Eventually, each score should be used as an adjunct to the good clinical judgement.

(Fri. Mar 1, 2019 9:00 AM - 10:00 AM 第5会場)

[IL(E)4-2] Update from TSCCM: Vasopressors in sepsis

Chairat Permpikul （Siriraj Hospital, Thailand）

【 同時通訳付き】

• Chairman, Department of Medicine and the chief of Medical ICU, Siriraj Medical School, Mahidol University, Bangkok, Thailand
• Chairman of Education and International Relation, The Thai Society of Critical Care Medicine
Research Interests
• Sepsis and septic shock, focusing on hemodynamic management and monitoring.
• Mechanical ventilation, focusing on monitoring
• ICU administration, focusing on ICU design and quality improvement

Sepsis pathophysiology includes generalized vasodilatation and vascular leakage from generalized inflammation which arises from uncontrolled infection. Depressed cardiac contractility is also noted in some patients. Hypotension is considered as distributive event and resuscitation thus consists of fluid therapy to restore intravascular volume depletion and vasopressors to correct vasodilatation.
Regarding the uses of vasopressors, norepinephrine (NE) is advocated as the first line agent. When compared with dopamine, use of NE resulted in lower mortality and less occurrence of arrhythmia. Vasopressin or antidiuretic hormone is introduced lately as low natural level was noted in sepsis patients. At present, the 2016 Surviving Sepsis Campaign suggests vasopressin in patients who are not responsive to high dose NE. Epinephrine is preserved in refractory shock but its use as a first line agent is not advocated due to reports of high mortality and morbidity.
Use of vasopressors requires close monitoring. First, macrocirculation target, the mean arterial pressure of 65 mmHg, needs to be frequently assessed. Tissue perfusion or “ microcirculation” is another important concern since intense vasoconstriction might compromise microcirculation. Moreover, local complication needs to be frequently assessed, especially in those whom NE is given via peripheral vein.
Perfect timing of vasopressors has long been discussed. Evidences supporting early use are accumulating. Recently, our double blind RCT disclosed that the administration of low dose NE during the initiation of resuscitation resulted in higher shock reversal rate at 6 hours, nonsignificant lower mortality and less cardiac complication.

海外招請講演

[IL(E)5] 海外招請講演5

座長:丸藤 哲(医療法人 徳洲会 札幌東徳洲会病院救急センター)

Fri. Mar 1, 2019 10:05 AM - 10:55 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)5] Tranexamic acid in life threatening bleeding

Ian Roberts （London School of Hygiene &Tropical Medicine, UK）

(Fri. Mar 1, 2019 10:05 AM - 10:55 AM 第5会場)

[IL(E)5] Tranexamic acid in life threatening bleeding

Ian Roberts （London School of Hygiene &Tropical Medicine, UK）

【 同時通訳付き】

Expertise: large-scale clinical trials, systematic reviews, epidemiology.
Qualifications
• MB ChB (1985) • MRCP paediatrics (1988) • PhD (1994) • FRCP (2009) • FFPH (2001)
Employment
August 1995 - March 2001 Director, Child Health Monitoring Unit, Institute of Child Health.
Honorary Consultant, Great Ormond Street Hospital for Children.
Current appointment (since May 2001)
Professor of Epidemiology and Public Health, London School of Hygiene &Tropical Medicine
Director, LSHTM Clinical Trials Unit
Coordinating Editor, Cochrane Injuries Group, Cochrane Collaboration
Head, World Health Collaborating Centre on Research and Training in Violence and Injury Prevention
Honorary Consultant in Trauma Services, Barts and the Royal London NHS Trust
Selected relevant roles
Director, WHO Collaborating Centre on Violence and Injury Prevention
Editor-in-Chief and Founder, Cochrane Injuries Group (impact factor 7.7)
Founder and member, Climate and Health Council (http://www.climateandhealth.org/)
Founder and member, International Council for Road Safety
Trustee, RoadPeace (UK Victims of Road Traffic Crashes)

Relevant publications
WOMAN Trial Collaborators (Roberts I PI). Effect of early administration of tranexamic acid on mortality, hysterectomy, other morbidities in women with postpartum haemorrhage (The WOMAN trial): a randomised, placebo-controlled trial. Lancet 2017; 389: 2105-2116.

CRASH-2 collaborators, Roberts I (PI), Shakur H, Afolabi A, Brohi K, Coats T, et al. The importance of early treatment with tranexamic acid in bleeding trauma patients: an exploratory analysis of the CRASH-2 randomised controlled trial. Lancet. 2011;377(9771):1096-101, 101 e1-2. Epub 2011/03/29.

CRASH-2 trial collaborators, Shakur H, Roberts I (PI), Bautista R, Caballero J, Coats T, et al. Effects of tranexamic acid on death, vascular occlusive events, and blood transfusion in trauma patients with significant haemorrhage (CRASH-2): a randomised, placebo-controlled trial. Lancet. 2010;376(9734):23-32. Epub 2010/06/18.

Angèle Gayet-Ageron, David Prieto-Merino, Katharine Ker, Haleema Shakur, François-Xavier Ageron, Ian Roberts for the Anti-fibrinolytic Trials Collaboration. Effect of treatment delay on the effectiveness and safety of antifibrinolytics in acute severe haemorrhage: a meta-analysis of individual patient-level data from 40 138 bleeding patients. Lancet 2017 Nov 7. pii: S0140-6736(17)32455-8. doi: 10.1016/S0140-6736(17)32455-8

Selected current projects:
The international CRASH-3 trial: A randomised placebo controlled trial to quantify the effectiveness and safety of a short course of tranexamic acid (TXA) in 10,000 adults with acute traumatic brain injury (TBI).

Funded by the UK Medical Research Council, The Wellcome Trust, the UK Department for International Development and the National Institute of Health Research. (£3.7 million). https://ctu-web.lshtm.ac.uk/c3w/
The international HALT-IT trial: Tranexamic acid for the treatment of gastrointestinal haemorrhage: an international randomised, double blind placebo controlled trial in 8,000 patients. http://haltit.lshtm.ac.uk/
Getting research into practice: GATES Foundation US$3 million (to ensure that the results of the woman trial improve the care of women with post-partum haemorrhage world-wide).

The CRASH-2 trial was a large randomised placebo controlled trial of tranexamic acid in patients with or at risk of traumatic haemorrhage that was undertaken in 274 hospitals in 40 countries. A total of 20 211 adult trauma patients with, or at risk of, significant bleeding were randomly assigned within 8 h of injury to either tranexamic acid (loading dose 1 g over 10 min then infusion of 1 g over 8 h) or matching placebo. The results showed that early (within three hours of injury) tranexamic acid treatment reduces the risk of death due to bleeding by about 30% and that treatment beyond three hours is ineffective. Similar results were obtained in the Woman trial of tranexamic acid in the treatment of post-partum haemorrhage that included 20,060 recruited from 193 hospitals in 21 countries. An individual patient data meta-analysis of the two trials showed that tranexamic acid significantly increased overall survival from bleeding (odds ratio [OR] 1•20, 95% CI 1•08–1•33; p=0•001), with no heterogeneity by site of bleeding (interaction p=0•7243). However, treatment delay reduced the treatment benefit (p<0•0001). Immediate treatment improved survival by more than 70% (OR 1•72, 95% CI 1•42–2•10; p<0•0001). Thereafter, the survival benefit decreased by 10% for every 15 min of treatment delay until 3 h, after which there was no benefit. There was no increase in vascular occlusive events with tranexamic acid, with no heterogeneity by site of bleeding (p=0•5956). Treatment delay did not modify the effect of tranexamic acid on vascular occlusive events. These results have important implications for patient care both internationally and in Japan and suggest that pre-hospital tranexamic acid administration can substantially increase survival in patients with acute severe bleeding. Efforts to facilitate the pre-hospital use of tranexamic acid in Japan are are currently underway.

海外招請講演

[IL(E)6] 海外招請講演6

座長:中川 聡(国立研究開発法人国立成育医療研究センター集中治療科)

Fri. Mar 1, 2019 11:00 AM - 11:50 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)6] Moral distress: I know what to do but I can’ t !!!

Daniel Garros （University of Alberta Stollery Children’s Hospital, Canada）

(Fri. Mar 1, 2019 11:00 AM - 11:50 AM 第5会場)

[IL(E)6] Moral distress: I know what to do but I can’ t !!!

Daniel Garros （University of Alberta Stollery Children’ s Hospital, Canada）

【 同時通訳付き】

Daniel Garros, MD, is a Canadian-Brazilian PICU attending/staff physician at the Stollery Children's Hospital in Edmonton, Alberta, Canada.
He is also a Clinical Professor, Department of Pediatrics and John Dossetor Health Ethics Centre, F of Medicine, University of Alberta.

He co-lead of the PICU Quality&Safety committee as well as the PICU Bereavement &Compassion Committee and is a member of the same committee at the hospital level.
He sits at the Stollery Child Health Quality Assurance, Improvement &Patient Safety Collaborative QAC. He is also responsible for the PICU database system.
Dr Garros has published on moral distress in the PICU, end of life care in pediatrics, supporting staff in the PICU, end-of-life decision-making, quality and safety, ECMO and Renal replacement therapy.

He was the co-PI on a large multicenter study on Moral Distress in PICU, supported by a CHIR(Canadian Institute for Health and Research) grant. He was the technical director and co-producer of a Movie on Moral Distress for health care Professionals, titled "Just Keep Breathing", as the result of this project. His research interests include end-of-life care, bereavement, medical ethics, professional well being, and quality and safety in health care delivery.
Father of 3 teenager kids and still a soccer player on his spared time!"
He has been to Japan twice, the first time was in 1989 as a young PICU fellow presenting for the first time ever outside Brazil 2 papers at the World Conference in Critical Care in Kyoto!

Introduction: Moral distress is the term increasingly used by healthcare professionals to name the angst they experience when they feel unable to practice as they should.
It has been described as the pain or anguish affecting the mind, body, or relationships in response to a situation in which the person is aware of a moral problem, acknowledges moral responsibility, and makes a moral judgment about the correct action; yet, as a result of real or perceived constraints, participates in perceived moral wrongdoing.
Perception, however, is key to understanding this experience. In the exact same circumstance, one professional may believe that one course of action, such as extending life-sustaining treatment (LST) as far as possible, is the right thing to do, while another professional may find it unethical. Either professional may experience Moral Distress depending on the course chosen and the degree to which the professional feels s/he has been complicit in “ doing the wrong thing”.

Methods: Using personal narratives, a research was conducted in 6 pediatric Intensive Care units in Canada collecting stories, which were analyzed, changed and then a typology was created. A movie was made with some of the stories, depicting the ethical issues and how an ICU team deals with conflict and the stressful environment where they work.

Presentation: After elaborating on the concept described above, we will ascertain measures to resolve moral distress, from “ reframing the suffering” to building moral resilience and moral courage within ICU health care teams. The presentation will also discuss Burn Out and how this universal phenomenon is close intricate with Moral Distress in the ICU.

Conclusion: Moral Distress is here to stay; it is a sign of moral sensitivity and being humans. Resolving this condition is crucial to maintain good team work and keep the health care professionals engaged and motivated, to provide the best care they can to the patients.

海外招請講演

[IL(E)7] 海外招請講演7

座長:坂本 哲也(帝京大学医学部救急医学講座)

Fri. Mar 1, 2019 2:00 PM - 2:50 PM 第5会場 (国立京都国際会館1F Room D)

[IL(E)7] The 50th anniversary of ARDS: What has been changed?

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

(Fri. Mar 1, 2019 2:00 PM - 2:50 PM 第5会場)

[IL(E)7] The 50th anniversary of ARDS: What has been changed?

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.

The 50 year from the diagnosis of ARDS and the evolution of the concepts and therapies will be reported and analysed.
Since first identification to the present time there was an incredible evolution of mechanical ventilation and supportive techniques with some improvement of the mortality rate.
The therapies are now allocated in specific time windows and timing of interventions, rendering more sophisticated and effective our approach as physician to this difficult syndrome.

海外招請講演

[IL(E)8] 海外招請講演8

座長:江木 盛時(神戸大学医学部附属病院麻酔科)

Fri. Mar 1, 2019 2:55 PM - 3:45 PM 第5会場 (国立京都国際会館1F Room D)

[IL(E)8] Acute glycemic control in patients with diabetes

Adam Deane （Royal Melbourne Hospital, University of Melbourne, Australia）

(Fri. Mar 1, 2019 2:55 PM - 3:45 PM 第5会場)

[IL(E)8] Acute glycemic control in patients with diabetes

Adam Deane （Royal Melbourne Hospital, University of Melbourne, Australia）

【 同時通訳付き】

Adam is a clinician/researcher with interests in critical care glucose metabolism, nutrition and gastrointestinal function, clinical trials and outcomes from critical illness. He currently serves as Senior Staff Specialist, Head of Intensive Care Unit Research, and Deputy Director Intensive Care Unit at The Royal Melbourne Hospital in Melbourne, Australia. Adam is also employed part-time role as Principal Research Fellow, Intensive Care with the University of Melbourne. He holds a Career Development Fellowship with the National Health and Medical Research Council (NHMRC).

Prevalence of type 2 diabetes mellitus in the critically ill

Type 2 diabetes mellitus (T2DM) is a frequent (15-25%) pre-existing medical condition in critically ill patients.

Hyperglycaemia in critically ill patients without diabetes

Observational data indicate that markedly elevated blood glucose concentrations are associated with adverse outcomes in critically ill patients without T2DM. The landmark multinational NICE-SUGAR trial allocated critically ill patients to receive ‘intensive glucose control’ (4.5-6.0 mmol/l) or ‘conventional glucose control’ (<10.0 mmol/l). In this cohort, conventional glucose control reduced 90-day all-cause mortality, probably via a reduction in hypoglycaemia.

Hyperglycaemia in critically ill patients with T2DM

Observational studies, including seminal work from Doctor Moritoki Egi, have consistently reported that the association between death and hyperglycaemia is markedly affected by adjustment for pre-existing T2DM, such that maintaining blood glucose >10.0 mmol/l appears to be associated with reduced mortality. Within the limitations of these observational studies, and their inherent risk of residual confounding variables, these data support the hypothesis that glucose concentrations that are regarded as safe and desirable in those without diabetes might, instead, be undesirable and harmful in patients with T2DM.

A substantial limitation of previous trials is that study participants with previously normal glucose tolerance and those with T2DM were considered together, with the latter group comprising only a small proportion of the sample population. This is important as the risk of treatment-induced hypoglycaemia is greatest in those with pre-existing T2DM and it also appears to be associated with greater harm.

Exploratory study of ‘liberal’ glucose control

Using a sequential period design three studies have been recently published that have compared ‘standard’ care and ‘liberal’ glucose targets. These studies, which all have substantial methodological limitations, suggest that hypoglycaemia and glycaemic variability, the latter is also associated with increased mortality, are reduced with this approach.

Summary

While these are promising data to support the hypothesis we, on behalf of the Australian and New Zealand Intensive Care Society Clinical Trials Group (ANZICS-CTG), are conducting a multicenter randomized clinical trial to compare the outcomes of targeting ‘liberal' blood glucose concentrations to ‘standard care’ glucose control (< 10 mmol/l) in critically ill patients with T2DM.

My presentation will focus on the concept of acute glycaemic control in patients with T2DM and the rationale for a more liberal approach, as well as emphasis on waiting for well conducted and adequately powered clinical trials before changing clinical practice.

海外招請講演

[IL(E)9] 海外招請講演9

座長:布宮 伸(自治医科大学医学部麻酔科学・集中治療医学講座集中治療医学部門)

Fri. Mar 1, 2019 3:50 PM - 4:40 PM 第5会場 (国立京都国際会館1F Room D)

[IL(E)9] Pain management in critical care; why, whom, and how? -The role of CPOT

Celine Gelinas （McGill University, Canada）

(Fri. Mar 1, 2019 3:50 PM - 4:40 PM 第5会場)

[IL(E)9] Pain management in critical care; why, whom, and how? -The role of CPOT

Celine Gelinas （McGill University, Canada）

【 同時通訳付き】

Céline Gélinas, RN, PhD is Associate Professor at Ingram School of Nursing, McGill University, and Researcher at the Centre for Nursing Research and the Lady Davis Institute of the Jewish General Hospital in Montréal, Québec, Canada. Her expertise is related to pain assessment and management in the adult intensive care unit, and she is the developer of the Critical-Care Pain Observation Tool (CPOT). She has been involved in the development of pain management and critical care guidelines at the national and the international level, and was the leader of the pain section of the 2018 Society of Critical Care Medicine practice guidelines.

Pain is highly prevalent in critically ill patients and is complex to manage. Pain assessment is the first essential step to pain management. Although the self-report is the gold standard measure for pain, many patients are unable to self-report in the intensive care unit (ICU) due to their critical condition and altered levels of consciousness. In such situations, alternative measures must be used for pain assessment and monitoring.

The objectives of this presentation are to:

a) Review a stepwise approach to pain assessment and appropriate tools
b) Describe the use and recent development of the Critical-Care Pain Observation Tool (CPOT) with case studies
c) Describe the strategies to improve pain management in critical care and further research steps
During this presentation, key elements from the recent 2018 Society of Critical Care Medicine practice guidelines for pain management will be addressed. A stepwise approach to pain assessment which includes appropriate tools to use in ICU patients, and the potential role of family members will be discussed. The CPOT will be described and its recent development in brain-injured ICU patients will be addressed. Attendees will have the opportunity to practice scoring with the CPOT using case studies and videos. Limitations of vital signs for ICU pain assessment will be discussed. Pain management strategies including the use of assessment-driven protocols, multimodal and preventive analgesia will be described. Finally, future steps in ICU pain management research will be highlighted.

海外招請講演

[IL(E)10] 海外招請講演10

座長:川前 金幸(国立大学法人山形大学医学部附属病院麻酔科)

Fri. Mar 1, 2019 4:45 PM - 5:35 PM 第5会場 (国立京都国際会館1F Room D)

[IL(E)10] A multidisciplinary rehabilitation approach to facilitating early engagement and mobilization in the ICUs at Stanford Medical Center

Shohei Takatani （Stanford Health Care, USA）

(Fri. Mar 1, 2019 4:45 PM - 5:35 PM 第5会場)

[IL(E)10] A multidisciplinary rehabilitation approach to facilitating early engagement and mobilization in the ICUs at Stanford Medical Center

Shohei Takatani （Stanford Health Care, USA）

【 同時通訳付き】

Shohei Takatani is a Senior Occupational Therapist who works with Stanford Health Care as a primary occupational therapist on the Critical Care team at Stanford Hospital. As a part of a multi-disciplinary medical team, Shohei is dedicated to developing, enhancing and restoring functional capacity to his patients whose ability to cope with the tasks of daily living have been impaired or threatened by physical illness or injury, psychosocial disabilities, aging process or developmental deficits. Assessing patient needs in consultation with the individual patient, family, and other appropriate persons, Shohei considers elements such as pre-vocational evaluation, physiological and psychosocial re-conditioning, fabrication and training in the use of orthotic or prosthetic devices and other assistive technology devices, as well as the adaptation of environments and processes to enhance functional performance. Shohei also has extensive experience managing rehabilitation of critically ill patients in the ICU and cardiopulmonary patients requiring advanced therapies, such as mechanical circulatory support devices and solid organ transplants.

In addition to mentoring and advising new occupational therapists, Shohei has made presentations at the American Occupational Therapy Association, Stanford University Medical Center, Kaiser Permanente Santa Clara Medical Center, and San Jose State University among others. Shohei also holds an Advanced Practice Certification in Hand Therapy.

EDUCATION
BS, MS, Occupational Therapy (2007-2010)
San Jose State University

PROFESSIONAL EXPERIENCE
Customer Service Professional (2002-2003)
Japan Airlines Passenger Services of America
Occupational Therapy Intern: Pediatrics (2009)
San Jose State University
Occupational Therapy Level II Intern – Critical Care (2010)
Stanford Hospital and Clinics
Occupational Therapy Intern II (2010)
Santa Clara Valley Medical Center, Acute Psychiatric Services
Senior Occupational Therapist - Critical Care (2011-)
Stanford Hospital &Clinics

Advances in critical care have led to increased survival and, as a result, the recognition of prolonged physical and psychosocial morbidity after critical illness. Neuromuscular dysfunction has been identified in many intensive care unit (ICU) patients with sepsis, multi organ failure, or prolonged mechanical ventilation and is associated with a longer duration or mechanical ventilation and increased length of ICU and hospital stay [1].

Early Mobility (EM) and engagement is an essential component of the ABCDEF bundle that has been effective in reducing ICU - Acquired weakness as well as an effective intervention to significantly affect delirium.

The three ICUs at Stanford Medical Center (SMC) consist of the Cardiovascular ICU, the Medical Surgical Neurological ICU, and the Coronary Care Unit (CCU). Every ICU has a designated rehabilitation team comprised of occupational therapists (OT), physical therapists (PT), speech language pathologists (SLP) and rehabilitation aides (RA). At SMC, over 90% of ICU patients receive consults to PT and OT when medically appropriate, and are initiated on a standard, intermediate, or intensive rehabilitation program based on appropriateness. All rehabilitation programs emphasize the utilization of structured activity programs, progressive exercise programs and safe patient handling equipment such as hospital beds with tilting features, overhead lift systems, chairs with pressure relieving capabilities in order to facilitate safe and effective participation in EM and engagement for both patient and staff. Incorporating family involvement. In order to care for our critically ill patients, we collaborate with interdisciplinary members on a daily basis. EM can be performed by any part of the interdisciplinary team including nurses, physical therapists, occupational therapists, or physicians and it can consist of activities from passive range of motion to ambulation.

As a result of our ICU early mobility and engagement rehabilitation program, cardiac surgery and transplant patients’ length of stay (LOS) in the ICU and overall hospital length of stay has been reduced. Additionally, we have also noted a reduction in staff injury rates related to EM and engagement practices in the ICU.

EM has been a standard of practice in the ICUs at SMC and the emphasis on early mobility and engagement in structured ICU rehabilitation programs have been very safe and successful for our patients at SMC as well as for the care team members. Through close collaboration with nursing staff, primary medical team members, and other ancillary services, i.e., respiratory therapy (RT), perfusionists, dietitians (RD), we have a strong mobility culture and we continue to strive to provide effective EM and early engagement in our critically ill patients.

[1] Stevens RD, Dowdy DW, Michaels RK, Mendez-Tellez PA, Pronovost PJ, Needham DM, Neuromuscular dysfunction acquired in critical illness: a systematic review. Intensive Care Med 2007; 33:1876-91.

海外招請講演

[IL(E)11] 海外招請講演11

座長:黒田 泰弘(香川大学医学部附属病院救命救急センター)

Sat. Mar 2, 2019 8:45 AM - 9:35 AM 第2会場 (国立京都国際会館2F Room A)

共催:アイ・エム・アイ株式会社

[IL(E)11] Neurocritical care 2019: Recent advances and future frontiers

Stephan A. Mayer （Henry Ford Health System and the Mount Sinai Health System, USA）

(Sat. Mar 2, 2019 8:45 AM - 9:35 AM 第2会場)

[IL(E)11] Neurocritical care 2019: Recent advances and future frontiers

Stephan A. Mayer （Henry Ford Health System and the Mount Sinai Health System, USA）

【 同時通訳付き】

Stephan A. Mayer, MD, FCCM, is a practicing neurointensivist and the William T. Gossett Chair of Neurology for the Henry Ford Health System in Detroit, Michigan. Prior to that Dr. Mayer was Director of Neurocritical Care for the Mount Sinai Health System in New York, where he also founded the Institute for Critical Care Medicine at the Icahn School of Medicine. Prior to that he was Professor of Neurology and Neurological Surgery at Columbia University College of Physicians and Surgeons in New York, NY.

Dr Mayer earned his medical degree from Cornell University Medical College in New York City. He completed a residency in neurology and a fellowship in critical care neurology at the Neurological Institute of New York, Columbia-Presbyterian Medical Center. He is board certified in neurology and neurocritical care, and was a founding member and is past-president of the Neurocritical Care Society.

Dr. Mayer has published more than 240 original research articles, 180 review articles, 340 abstracts, and written or edited eight books, including the most recent edtion of Merritt’ s Textbook of Neurology, considered a standard text in the field. He was principal investigator of the FAST Trial, a worldwide multicenter clinical trial evaluating ultra-early hemostatic therapy for brain hemorrhage, and served as principal investigator of the NIH-funded New York Presbyterian Hospital hub of the Neurological Emergencies Treatment Trials (NETT) network and the Columbia University Outcomes Project. His work in helping victims of severe brain injury has been featured in the Wall Street Journal and the book Cheating Death, by CNN medical correspondant Dr. Sanjay Gupta.

海外招請講演

[IL(E)12] 海外招請講演12

座長:射場 敏明(順天堂大学医学部附属 順天堂医院救急・災害医学)

Sat. Mar 2, 2019 9:40 AM - 10:30 AM 第2会場 (国立京都国際会館2F Room A)

共催:日本製薬株式会社

[IL(E)12] Sepsis: New insights into pathophysiology and a sneak preview to future therapy

Thomas van der Poll （Amsterdam University Medical Centers, University of Amsterdam, Netherlands）

(Sat. Mar 2, 2019 9:40 AM - 10:30 AM 第2会場)

[IL(E)12] Sepsis: New insights into pathophysiology and a sneak preview to future therapy

Thomas van der Poll （Amsterdam University Medical Centers, University of Amsterdam, Netherlands）
【 同時通訳付き】

Curriculum vitae (September 2018)

Name Tom van der Poll
Date of birth March 20, 1961
Nationality Dutch
Sex Male

Current and recent positions

12/2016 Chair, Department of Medicine, Academic Medical Center, University of Amsterdam, the Netherlands.

01/2011 – 12/2016 Head, Division of Infectious Diseases, Academic Medical Center, University of Amsterdam, the Netherlands.

01/2007 – 12/2016 Head, Center for Experimental and Molecular Medicine, Academic Medical Center, University of Amsterdam, the Netherlands.

03/2003 Professor of Medicine, University of Amsterdam, the Netherlands.

Education and experience

Board Certified Infectious Diseases May 15, 2000

Board Certified Internal Medicine December 15, 1991
Resident Internal Medicine 1986 – 1991, Academic Medical Center, Amsterdam, the Netherlands

PhD title October 10, 1991 [University of Amsterdam]
Thesis: "Tumor necrosis factor: biologi¬cal responses in humans"

Medical degree November 1986
Medical School, University of Amsterdam 1978 – 1986
Registration (BIG) number: 19023304301

Other activities
• Council member and past Chair of the International Sepsis Forum
• Supervisor (“Promoter”) of 64 succesfully completed PhD projects
• Principal Investigator of >50 research grants
• Member of advisory boards and steering committees of several pharmaceutical companies
• Member of Data Safety Monitoring Boards and Clinical Evaluation Committees of several trials on sepsis, pneumonia and rheumatoid arthritis

Web of Science report:
911 publications; 39,371 citations; 4,223 times in 2017
Hirsch index 98

Selected publications (most recent 10 years)

1. Scicluna B.P., van Vught L.A., Zwinderman A.H., Wiewel M.A., Davenport E.E., Burnham K.L., Nürnberg P., Schultz M.J., Horn J., Cremer O.L., Bonten M.J., Hinds C.J., Wong H.R., Knight J.C., van der Poll T. Classification of sepsis patients as blood genomic endotypes: a prospective cohort study. Lancet Respiratory Medicine 2017; 5: 816-826.
2. Van der Poll T., van de Veerdonk F.L., Scicluna B.S., Netea M.G. The immunopathology of sepsis and potential therapeutic targets. Nature Reviews Immunology 2017; 17(7):407-420.
3. Van Vught L.A., Wiewel M.A., Hoogendijk A.J., Frencken J.F., Scicluna B.P., Klein Klouwenberg P.M., Zwinderman A.H., Lutter R., Horn J., Schultz M.J., Bonten M.M., Cremer O.L., van der Poll T. The host response in sepsis patients developing Intensive Care Unit-acquired secondary infections. Am. J. Respir. Crit. Care Med. 2017; 196: 458-470.
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Bibliography

Tom van der Poll is Professor of Medicine and Chair of the Department of Medicine in the Amsterdam University Medical Centers, location Academic Medical Center, University of Amsterdam, the Netherlands. Van der Poll is board certified in Internal Medicine and Infectious Diseases. His training included a postdoctoral research fellowship in Cornell University Medical College in New York (1993-1995). Van der Poll’ s research focuses on pneumonia and sepsis, particularly on pathogenesis, the host response and biomarkers. He published >800 articles on this topic. Van der Poll has served as a member of Data Safety and Clinical Monitoring Boards of several pivotal phase III sepsis and pneumonia trials evaluating immunomodulatory agents.

The sepsis-associated host response is characterized by concurrent excessive inflammatory, catabolic, metabolic and immune suppressive features, and a failure to return to homeostasis, which oftentimes results in a condition referred to as chronic critical illness. The understanding of key mechanisms involved in the pathogenesis of sepsis has increased tremendously, yet this still needs to be translated into novel targeted therapeutic strategies. Pivotal for the clinical development of new sepsis therapies is selection of patients based on biomarkers and/or functional defects that provide specific insight in the expression or activity of the therapeutic target. Future research should focus the discovery and validation of biomarkers that reflect predominant pathophysiological mechanisms at different body sites and can guide selection of patients for targeted therapies and the monitoring thereof.

海外招請講演

[IL(E)13] 海外招請講演13

座長:佐藤 直樹(日本医科大学武蔵小杉病院内科・循環器内科・集中治療室)

Sat. Mar 2, 2019 10:35 AM - 11:25 AM 第2会場 (国立京都国際会館2F Room A)

[IL(E)13] High sensitivity cardiac troponin assays: How they are being used across the world for the evaluation of patients with suspected acute coronary syndromes — Possible implications for Japan

Richard Michael Nowak （Henry Ford Hospital, USA）

(Sat. Mar 2, 2019 10:35 AM - 11:25 AM 第2会場)

[IL(E)13] High sensitivity cardiac troponin assays: How they are being used across the world for the evaluation of patients with suspected acute coronary syndromes — Possible implications for Japan

Richard Michael Nowak （Henry Ford Hospital, USA）

【 同時通訳付き】

EDUCATION:

Michael Power High School1961 - 1966
Toronto, Ontario
Senior Matriculation (Grade 13)

University of Toronto1966 - 1968
Pre-Medicine
Toronto, Ontario, Canada

University of Toronto1968 - 1972
Medical School
Medical Doctor
Toronto, Ontario, Canada

Executive MBA Program1988 - 1990
Michigan State University
Business School
Broad Graduate School of Management
East Lansing, Michigan
Masters Business Administration
Member, Beta Gamma Sigma

GRADUATE TRAINING:

Montreal General Hospital1972 - 1973
Montreal, Quebec
Straight Medicine

Research Fellow1974 - 1975
Clinical Science Division
University of Toronto

LICENSURE AND CERTIFICATION:

National Board of Medicine Examinations1972

College of Physicians and Surgeons of Ontario1972 - 1976
1985 - 2013

California State Medical Licensure1973 - present

Michigan State Medical Licensure1975 - present

Diplomate of the American Board of Emergency Medicine1981 - 1991

Recertification - American Board of Emergency Medicine1991 - 2001
2001 - 2011
2011 - 2021

Fellow, American College of Emergency Physician1982 - present

Fellow, American Academy of Emergency Medicine2000 - present

HOSPITAL AND STAFF APPOINTMENTS:

Staff Physician1973 - 1974
Emergency Department
Belleville General Hospital
Belleville, Ontario

Staff Physician1974 - 1975
(East York Medical Emergency Group)
Emergency Department
Toronto East General Hospital
Toronto, Ontario

Senior Staff1975 - present
Division/Department of Emergency Medicine
Henry Ford Hospital
Detroit, Michigan

Associate Head 1981 - 1983
Division of Emergency Medicine
Henry Ford Hospital
Detroit, Michigan

Vice Chairperson1983 - 1988
Department of Emergency Medicine

Henry Ford Hospital
Detroit, Michigan

Associate Staff1989 - 1994
Emergency Medicine 2007 - present
Cottage Hospital
Grosse Pointe Farms, Michigan

Chairperson1988 - 1992
Department of Emergency Medicine
Henry Ford Hospital
Detroit, Michigan

Vice Chairperson1992 - 2006
Department of Emergency Medicine
Henry Ford Hospital
Detroit, Michigan

Past Chairperson 2006 - present
Department of Emergency Medicine
Henry Ford Hospital
Detroit, Michigan

High sensitivity cardiac troponin (hs-cTn) assays (as defined by the International Federation of Clinical Chemists) since 2015 have been recommended by the European Society of Cardiology (ESC) for the rapid (very low baseline value or the use of a 1 hour delta threshold value algorithm) rule-out and rule-in of acute myocardial infarction (AMI) in selected patients (chest pain complaint, symptoms of We have very recently reported the results of a single center US trial (REACTION-US) assessing the use of the ESC recommended hs-cTnT (Roche Diagnostics) rapid 1 hour or less rule-out and rule-in AMI algorithm for all patients presenting with any suspicious symptoms. The rapid rule-out assessment results are very similar (high negative predicted values and sensitivities) but the rule-in assessments are significantly different with lower positive predictive values and specificities for AMI in the US when compared to the hs-cTnT algorithm currently used in Europe.
A large US multicenter study (HIGH U.S.) assessing the use of a hs-cTnI assay (Siemens Diagnostics) as recommended by the ESC published rapid assessment guidelines but enrolling all comers with symptoms suspicious for AMI has been recently completed. The initial results in this patient population with many risk factors for coronary artery disease show similarly very high negative predicted values and sensitivities but lower and inadequate positive predictive values for AMI when using the ESC guidelines for this specific assay.

Given the combination of the European and more limited US data available there is movement in the US to utilize hs-cTn assays for the rapid rule-out of AMI (approximately 50 centers have implemented this approach) and for safe discharge when combined with a risk-stratification tool. This strategy will provide more efficient care and will lower costs for the evaluation for all patients presenting to the ED with any symptoms suspicions for AMI while maintaining a rate of missed AMI of less than one percent of patients. The algorithms for the rapid rule-in of AMI with appropriately high positive predictive values and specificities are most likely going to be determined in individual medical centers.

In Japan the use of hs-cTn assays for the evaluation of all patients with any symptoms suspicious for AMI would be helpful in all grades (urgent, emergency and critical care) of Emergency Medical care. More specifically this strategy would provide accurate rapid rule-out assessments for AMI. Given the experiences in Europe and the US it may not be necessary to validate this approach in a multicenter Japanese study.

海外招請講演

[IL(E)14] 海外招請講演14

座長:林 淑朗(医療法人鉄蕉会亀田総合病院集中治療科)

Sat. Mar 2, 2019 2:00 PM - 2:50 PM 第2会場 (国立京都国際会館2F Room A)

[IL(E)14] An update of the subtleties of infection management in the ICU

Jeffrey Lipman （The University of Queensland Centre for Clinical Research, Australia）

(Sat. Mar 2, 2019 2:00 PM - 2:50 PM 第2会場)

[IL(E)14] An update of the subtleties of infection management in the ICU

Jeffrey Lipman （The University of Queensland Centre for Clinical Research, Australia）

【 同時通訳付き】

Professor Jeffrey Lipman received his medical degree (MBBCh) from the University of Witwatersrand, South Africa and has specialist qualifications in anaesthesia (DA, FFA) and intensive care (FFA Crit Care, FCICM). Professor Lipman is Professor and Head of Anaesthesiology and Critical Care, University of Queensland and also is the Executive Director of the Burns, Trauma, Critical Care Research Centre at this University. He has Professorial attachments at QUT, University of New South Wales, Chinese University of Hong Kong and his Alma Mater, University of Witwatersrand.
He is a career Intensivist, having worked full-time in Intensive Care Units since 1979. His research interests include all aspects of infection management in intensive care. He has a special interest in the pharmacokinetics of antibiotics, an area in which he completed his MD through the Chinese University of Hong Kong where he still holds an Adjunct Professorial position.
He has published over 30 book chapters and over 500 peer-reviewed articles including in high impact journals like NEJM, JAMA and Lancet Infectious Diseases.
He has been an invited speaker to over 100 Congresses Nationally and Internationally, being a Keynote speaker in many countries around the world.

Sepsis is one of the leading causes of mortality and morbidity in the patients admitted to intensive care units (ICU). Despite evolving concepts and advances in management, the mortality associated with sepsis remains unexpectedly high. Early and appropriate antibiotic therapy has been the mainstay of treatment. There are however many unspoken subtleties in managing critically ill patients.
Firstly antibiotics (particularly broad spectrum) cause “collateral damage”, killing “good” commensal bacteria allowing resistant bowel organisms to grow. Currently the various syndromes we label as sepsis are often vague and poorly defined, predisposing to over use of antibiotics in inflammatory syndromes the causation of which may not be “infective”. New diagnostic genomic testing of host (patient) white cell mRNA may help differentiate the infective syndromes from other similar inflammatory conditions (1). A “watch and wait” philosophy for antibiotic initiation in the ICU in patients that are not acutely deteriorating has in fact been show to improve outcomes over a period of time (2). The importance of source control in managing patients with sepsis cannot be overemphasised (3). Finally, the longer a course of antibiotics is administered, the more the development of resistant bacterial overgrowth within the patients’ bowel, so shorter courses of antibiotics should be embarked upon where appropriate (4,5).

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海外招請講演

[IL(E)15] 海外招請講演15

座長:川前 金幸(国立大学法人山形大学医学部附属病院麻酔科)

Sat. Mar 2, 2019 2:55 PM - 3:45 PM 第2会場 (国立京都国際会館2F Room A)

[IL(E)15] Severe viral pneumonia: Significant?

Younsuck Koh （Asan Medical Center, University of Ulsan, Korea）

(Sat. Mar 2, 2019 2:55 PM - 3:45 PM 第2会場)

[IL(E)15] Severe viral pneumonia: Significant?

Younsuck Koh （Asan Medical Center, University of Ulsan, Korea）

【 同時通訳付き】

Dr. Koh is a physician scientist working as a Professor of Department of Pulmonary and Critical Care Medicine, a Professor of Department of Medical Humanities &Social Sciences, and a critical care physician at Asan Medical Center, the University of Ulsan College of Medicine in Korea. His research interests include ARDS, mechanical ventilation, sepsis, and medical ethics. He has published more than 360 articles in peer review journals.
He had served medical academy societies as a President of Korean Society of Critical Care Medicine, and as a President of the Korean Society for Medical Ethics. He also had served as an organizing chairman of the 12th World Federation of Societies of Intensive and Critical Care Medicine (WFSICCM) Congress in 2015, as a council of the WFSICCM for 8 years, and as a chairman of the Asian Collaboration of Critical Care Trial Group. He has been contributing to enhance mechanical ventilation cares in Asia as ex-chairman of Asian Ventilation Forum.

The pandemics of SARS, Avian influenza, new H1N1 influenza, and Middle East Respiratory Syndrome (MERS) awakened medical societies to the viral threat on respiratory failure. However, respiratory viruses, even a seasonal influenza virus, still have not been considering as a major cause of respiratory failure in adults. Clinician’ s under-recognition on viral causes is especially true in healthcare-associated pneumonia (HCAP). Moreover, neglect on viral causes lead to unnecessary antibiotic uses together with unnecessary multiple laboratory tests in viral pneumonia.
Several recent reports on adult viral infection showed that viruses accounted for approximately 13.5 to 56.2% of the cases of community acquired pneumonia (CAP). Rhinovirus, parainfluenza virus, influenza virus, respiratory syncytial virus and human metapneumovirus are major causes of viral pneumonia. Herpes simplex virus bronchopneumonia was not rare in nonimmuno-compromised patients with prolonged mechanical ventilation. Bacterial co-infections in viral pneumonias also are not rare. Virus infections seem to impair host immunity leading to secondary bacterial infections.
Clinical suspicion on a viral cause in a patient with lung infiltrates is the mainstay for the early detection. Clinical manifestations, chest radiography findings, and RT-PCR findings using nasopharyngeal or low respiratory specimen are considered together when a diagnosis is made. Early detection is crucial for better outcome of influenza pneumonia, because the limited antiviral agents are effective in early stage of the illness. Steroid administration seems to be harmful in influenza pneumonia. Low tidal volume of mechanical ventilation showed better outcome in new H1N1 influenza pneumonia than large tidal volume of mechanical ventilation. The mortalities of patients with respiratory failure caused by bacterial, viral, and bacterial-viral co-infections do not seem to be different. In conclusion, the clinical impact of respiratory viruses on respiratory failure is significant. Considering enormous burden on public health resources of viral pneumonia, further efforts should be devoted to establish the proper diagnosis measures and antiviral drugs development.

海外招請講演

[IL(E)16] 海外招請講演16

座長:三高 千恵子(順天堂大学大学院 麻酔科学)

Sat. Mar 2, 2019 3:50 PM - 4:40 PM 第2会場 (国立京都国際会館2F Room A)

[IL(E)16] Pick your syndrome: PICS or PIICS

Heatherlee Bailey （President Elect of SCCM）

(Sat. Mar 2, 2019 3:50 PM - 4:40 PM 第2会場)

[IL(E)16] Pick your syndrome: PICS or PIICS

Heatherlee Bailey （President Elect of SCCM）

【 同時通訳付き】

Dr Heatherlee Bailey completed medical school at the University of Medicine and Dentistry of New Jersey in Newark, NJ – now known as Rutgers. She undertook a residency in Emergency Medicine at the Medical College of Pennsylvania in Philadelphia, Pennsylvania and then joined their faculty. After a faculty fellowship in critical care, she served as her Department’ s Director of Critical Care Education and their Associate Residency Program Director for a decade. MCP merged with Hahnemann University and is now known as Drexel University. Twelve years later, Dr. Bailey’ career brought her to Duke University as well as the Durham VA Medical Center in North Carolina.

Her career has been rooted in education, trainee development, and mentorship. Mentorship is a focus that Heather has brought to her roles at SCCM. Her dedication and expertise has also been nationally recognized by the American Medical Association as they bestowed their Women’ s Mentoring Award upon her in 2008.

Given her prominence in the field, Dr. Bailey serves as an Oral Board Examiner for the American Board of Emergency Medicine. Her career interests in the management of injury and critical illness span the globe. She was a key developer of the Comprehensive Trauma Life Course for India as part of her work for the International Trauma Anesthesia and Critical Care Society.

Dr. Bailey has been actively involved in SCCM for more than 20 years serving in a wide variety of roles. No stranger to leadership, she served as a local Chapter President from 2003-2005. She was awarded the Dr Joseph and Rae Brown award for her Chapter level contributions in 2008. Fellowship in the American College of Critical Care Medicine followed in 2009 which was in turn followed by election to Council, the governing body for the society. Br. Bailey’ s path of volunteerism, mentorship and leadership has led her to be the first Emergency Medicine trained President of SCCM.

Acronyms are commonplace in medicine. It can be very challenging to be aware of all current acronyms. While there is occasional overlap, there typically is not almost identical phrasing that leads to different syndromes with near identical acronyms such as PIICS and PICS.
Persistent inflammation, immunosuppression and catabolism syndrome (PIICS) is a term initially generated by surgical intensivists to describe surgical ICU patients that survive their initial course of sepsis, trauma or other disease entity that have prolonged stays from persistent immune dysfunction. Unfortunately, this is a common state that is rarely reversible, and many patients end up in long term facilities or dying from this entity. PIICS is marked by persistent loss of lean body mass, failure to rehabilitate, sepsis recidivism, rehospitalization and increasing dependence and a slow prolonged path to death. The causes, mechanisms, and reasons for PIICS are largely unexplained. PIICS is an entity of non-survivors.
Survivors of critical illness that exhibit impairment in cognition, mental health and physical function is known as post-intensive care syndrome (PICS). Each of these elements is related to critical illness and the care that is required. The mental health of family members may also be affected and is termed PICS-Family (PICS-F). In the US almost 6 million patients are admitted to an ICU annually. Slightly less than 5 million will survive their ICU course. It is estimated that at least 50% will suffer from at least one component of PICS. Those that receive life support measures tend to have a persistence in PICS symptoms even at 12 months after their discharge from the ICU. SCCM is addressing how ICU care impacts long term outcomes with the ICU Liberation and Thrive programs. ICU Liberation focuses on the ABCDEF bundle for achieving better

outcomes in the ICU. Poorly managed pain, agitation and delirium (PAD) lead to longer ICU stays, increased cost and these patients have a higher incidence of long term physical and cognitive dysfunction. It has been shown that improved bundle compliance leads to higher odds of survival. The Thrive initiative focuses on peer support through the use of collaborative groups. There are several different templates that have been initiated with success across the US, UK and Australia.
It is clear that PIICS and PICS are totally different entities. If heard out of context it might be very confusing to know which process is being referred to. Though once some background is given, it should be relatively clear as one typically leads to death (PIICS) and the other is associated with issues of surviving critical illness (PICS). What is apparent is that more research is required for both entities to learn the best way to mitigate them. Which in turn will hopefully lead to a PICCS/PICS free ICU setting.

海外招請講演

[IL(E)17] 海外招請講演17

座長:稲葉 英夫(金沢大学附属病院救命センター)

Sat. Mar 2, 2019 8:45 AM - 9:35 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)17] Volume management in ICU patients

Sung Jin Hong （Catholic University of Korea Yeouido St. Mary's Hospital, Korea）

(Sat. Mar 2, 2019 8:45 AM - 9:35 AM 第5会場)

[IL(E)17] Volume management in ICU patients

Sung Jin Hong （Catholic University of Korea Yeouido St. Mary's Hospital, Korea）

【 同時通訳付き】

Institute / Position
Catholic University of Korea, College of Medicine,
Department of Anesthesiology, Pain and Critical Care Medicine
Professor
Education and Certification
1994: PhD (the Graduate School of Catholic University of Korea, College of Medicine)
1985: MD (Catholic University of Korea, College of Medicine)
2009: Subspecialty board for critical care medicine (Korean society of Critical Care medicine)
1989: Professional license of Anesthesiologist (Korean Society of Anesthesiologists)
Experience
Aug. 1996 - Aug 1997: Research Fellow of the Center of Anesthesiology Research in Cleveland Clinic Foundation (Ohio)
Mar. 2014 – Feb. 2018: Chairman of the Department of Anesthesiology, Pain and Critical Medicine, Catholic University of Korea, College of Medicine
Since 1989 to present: Faculty member of the Department of Anesthesiology, Pain and Critical Medicine, Catholic University of Korea, College of Medicine
Social Activity
President of the Korean Society of Critical Care Medicine (since 2018 to present)
Vice President of Seoul Medical Association (since 2018 to present)
Vice President of the Korean Society of Critical Care Medicine (since 2016 to 2018)
Director of Publication in the Korean Society of Critical Care Medicine/ Editor- in-Chief of the Korean Journal of Critical Care Medicine (since 2008 to 2016)
Director of Social Communication in the Korean Society of Anesthesiologists (since 2014 to 2016)
Director of Medicolegal Affairs in the Korean Society of Anesthesiologists (since 2010 to 2012)
Director of Scientific Affairs in Seoul Medical Association (since 2009 to 2012)

Striking the right balance between under- and over-resuscitation is a key part of volume management. However, assessing the degree of hypovolemia is difficult because of lack reliable clinical parameters. Many patients admitted to intensive care units are hypovolemic with heterogeneous pathophysiology. What fluid, and how much should we give to them? This review is focused on the recent advances and ongoing controversies about volume management in ICU patients.
Under steady state, the sub-glycocalyceal fluid with low oncotic pressure acts as a barrier between plasma and interstitial fluid. The plasma osmotic pressure moves sub-glycocalyceal fluid rather than the interstitial fluid. Theoretically, only 1/4 to 1/5 of the administered crystalloid solution should remain in the blood vessel, but indeed more fluid remains in intravascular space. The glycocalyceal layer is vulnerable to damage in ischemia and hypoxia. Maintaining and restoring the glycocalyx is an important concept of the fluid therapy.
When we judge the patient's volume status, we do not measure directly the plasma volume, instead we make a guess based on various clinical symptoms and parameters. The primary goal of the fluid administration is to restore the preload, but the ultimate goal is to improve the tissue perfusion and oxygen delivery, so the factors that determine the cardiac output and microcirculation should be considered.
The choice of fluid in ICU patients with various pathophysiology should be tailored to the individual

condition. Studies have concluded that colloids do not improve survival rates and are not cost-effective. Furthermore, synthetic colloids have been reported to increase the mortality rate and risk of renal failure in patients with sepsis.
In the patients with sepsis, balanced crystalloids may represent the first-line fluid. The synthetic colloids should be avoided because they have been shown more requirement of blood transfusion, renal replacement therapy, and higher prevalence of acute kidney injury and mortality. Albumin may improve outcomes. A reasonable threshold for red cell transfusion is Hb >7 g/dL. Initial IV bolus of 20-30 mL/kg is reasonable however, further fluid administration should be done carefully, and guided by dynamic measures of “ fluid responsiveness.
In patients with hemorrhage, the goal of resuscitation changed from early volume resuscitation to early hemorrhage control. Volume management in hemorrhagic patients should consider three principles, which are permissive hypotension, minimization of crystalloids and one to one plasma platelet to red cell transfusion, along effective damage control.
There are a variety of parameters but no gold standards to determine the volume status of patients. Volume management in ICU patients should be aimed at improving microcirculation, and so the balance between metabolism and oxygen supply. Recent trends follow a restrictive strategy as excess fluid also causes interstitial edema, which interferes with microcirculation and adversely affects patient outcomes. The choice of fluid should take into account the state of glycocalyx. The old idea of administering crystalloids more than four times of depleted plasma volume should be reexamined.

海外招請講演

[IL(E)18] 海外招請講演18

座長:丸藤 哲(医療法人 徳洲会 札幌東徳洲会病院救急センター)

Sat. Mar 2, 2019 9:40 AM - 10:30 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)18] End-of-life care, decision making and palliative care

Jozef Kesecioglu （University Medical Center Utrecht, Netherlands）

(Sat. Mar 2, 2019 9:40 AM - 10:30 AM 第5会場)

[IL(E)18] End-of-life care, decision making and palliative care

Jozef Kesecioglu （University Medical Center Utrecht, Netherlands）

【 同時通訳付き】

Jozef Kesecioglu is Professor of Intensive Care Medicine at the Department of Intensive Care Medicine, University Medical Center, Utrecht, the Netherlands. He completed his medical education and training in anesthesia and intensive care at the Medical School of University of Istanbul, Turkey, where he was later appointed as the head of the intensive care. After moving to the Netherlands in 1989, he worked in Erasmus Medical Center and Sophia Children’ s Hospital Rotterdam as anesthetist and pediatric intensivist respectively. He moved to Academic Medical Center in Amsterdam as the deputy director and has become interim director in the same department, before taking up his current position in 2002 in University Medical Center in Utrecht. He has re-organised the four intensive cares and made one department of it before designing and moving to the new, award winning, state-of-the-art ICU. He is currently the chair of the Management Team of the Division of Anesthesiology, Intensive Care and Emergency Medicine.

Professor Kesecioglu was Chairman of the Ethics Section of the European Society of Intensive Care Medicine (ESICM). After finishing his term, he worked in the Executive Committee of ESICM as the elected Chair of the Division of Scientific Affairs. He has also represented ESICM in the workgroup concerning "An official ATS/AACN/ACCP/ESICM/SCCM Policy Statement: Responding to Requests for Potentially Inappropriate Treatments in Intensive Care Units". He was elected as President of ESICM in 2016 and served as President Elect until recently. Currently, he is the President of ESICM until the end of his mandate in October 2020.

Professor Kesecioglu has authored around 130 published or in-press peer-reviewed papers and has been giving lectures in various scientific meetings. His main interests are ethics, intensive care environment and selective decontamination of the digestive tract.

Palliative sedation and palliative administration of opioids after withdrawal of treatment is common practice, normal care and an ethical requirement. The intent of the physician and not the dose of the medicine used is the determinant factor.

The use of confusing terms such as “ euthanasia” should be avoided in intensive care units. Withdrawing or withholding disproportionate life support and palliative care in intensive care patients not competent to give consent has no relation to euthanasia which is in response to a patient request to die.

Family involvement in decision making in the ICU varies greatly between countries. Variability may also exist within countries and even between intensivists within hospitals. Studies show that some family members want to share decisions with the physicians but do not want to make decisions alone. Others want to receive information without taking part in the decision at all.

Paternalism is neither equivalent to the lack of involvement of the family in decision making nor indicate bad communication. Intensive care unit caregivers should seek to develop collaborative relationships with their patients’ family members, based on an open exchange of information. Paternalism also may reflect a responsibility of the physician for decision making on medical grounds.

海外招請講演

[IL(E)19] 海外招請講演19（日本語）

座長:森﨑 浩(慶應義塾大学医学部麻酔学教室)

Sat. Mar 2, 2019 4:05 PM - 4:55 PM 第6会場 (国立京都国際会館1F スワン)

[IL(E)19] Extracellular vesicles: ARDSと敗血症の新しいターゲット

高田 正雄 （Imperial College London, UK）

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[IL(E)19] Extracellular vesicles: ARDSと敗血症の新しいターゲット

高田 正雄 （Imperial College London, UK）

1980 MD, Tokyo Medical and Dental University, Tokyo, Japan
1992 PhD in Medical Science, Toho University, Tokyo, Japan
1991 Japanese Board of Pediatrics
1994 Japanese Board of Anesthesiology
1999 GMC registration (#4587758), UK
Specialist Register: Intensive Care, Paediatric Anaesthesia

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急性呼吸窮迫症候群（ ARDS）は、その疾患概念が初めて報告されてから50年以上経過した現在においても、集中治療における最大の問題の一つである。 ARDSの死亡率は、人工呼吸による肺障害を軽減する呼吸管理の進歩により改善したものの、現在でも30-40%以上と高い。 ARDSの根本的な治療法、すなわち肺内炎症の急速な進行を抑える手段、あるいは敗血症からの ARDS、逆に ARDSから多臓器不全への進展をもたらす全身と肺の間の炎症の伝播を防ぐ手段は、未だ確立されてない。過去30年の研究により ARDS治療のターゲットとして多くのメディエーターが提唱されてきたが、いずれも臨床応用に至らず、 ARDSの translational researchは現在大きな曲がり角に来ているといえる。臨床試験への堅固な土台となりうる、より再現性・信頼性の高い基礎研究を行う努力は必須であろう。しかし同時に発想を根本的に変え、質的に異なる新ターゲットを見いだす試みが、今切実に求められている。

全ての細胞から多少とも放出される細胞外小胞 (Extracellular vesicles, EV) は、かつて単なる細胞の「塵」と考えられていたが、近年になって新しい細胞間コミュニケーション媒体として、医学各領域で大きく注目されている。 EVはタンパク質・脂質・核酸などさまざまな分子を積荷としていわばフェリーのように運搬している。EVによる情報伝達の大きな特徴は、こういった積荷分子が脂質二重膜内に格納されているため、体液・血液中で通常起こる急速な拡散・中和・分解から守られていることであろう。したがって EVは、炎症シグナルを一括してかつ安定した形で長距離運搬し、遠隔標的細胞や臓器に届けることが理論的に可能である。もし ARDSにおける炎症の進行や伝播に EVが関与しているとすれば、個々のメディエーターをブロックするより、それらを運ぶ「生物学的なフェリー」である EV自体の放出や標的細胞への取り込みをコントロールすることにより、新しい次元での治療戦略を確立できる可能性がある。

本講演では、 ARDS・敗血症領域における近年の EV研究を概観し、我々の最近の研究結果、特に EVの一種であるマイクロベジクル（ microvesicles）の ARDSにおける役割に関する知見を紹介する。 ARDS・敗血症の新しいバイオマーカー、治療ターゲットとしての EVの可能性に関して考察し、合わせて次世代の集中治療医学における translational researchの意義に関して考えてみたい。

海外招請講演

[IL(E)20] 海外招請講演20

座長:佐藤 直樹(日本医科大学武蔵小杉病院内科・循環器内科・集中治療室)

Sun. Mar 3, 2019 8:45 AM - 9:35 AM 第5会場 (国立京都国際会館1F Room D)

[IL(E)20] Congestion in acute heart failure

Alexandre Mebazaa （University Hospitals Saint-Louis &Lariboisière, University of Paris, France）

(Sun. Mar 3, 2019 8:45 AM - 9:35 AM 第5会場)

[IL(E)20] Congestion in acute heart failure

Alexandre Mebazaa （University Hospitals Saint-Louis &Lariboisière, University of Paris, France）

【 同時通訳付き】

University positions

2000-now Professor in Anesthesiology and Critical Care Medicine, Paris Diderot School of Medicine,
2009– now Co-Director of the Biomarker in cardiac failure team at U 942 Inserm, 42 Boulevard de la Chapelle, 75010, Paris, France

Clinical activities
2012- now Chairman of the Department of Anesthesia and Critical Care, Hôpitaux Universitaires Saint-Louis &Lariboisière Hospitals, 2 Rue A Paré, 75475 Paris Cedex 10, Paris, France

Major publications of the last years among 300+ articles on PubMed

Maack C, Eschenhagen T, Hamdani N, Heinzel FR, Lyon AR, Manstein DJ, Metzger J, Papp Z, Tocchetti CG, Yilmaz MB, Anker SD, Balligand JL, Bauersachs J, Brutsaert D, Carrier L, Chlopicki S, Cleland JG, de Boer RA, Dietl A, Fischmeister R, Harjola VP, Heymans S, Hilfiker-Kleiner D, Holzmeister J, de Keulenaer G, Limongelli G, Linke WA, Lund LH, Masip J, Metra M, Mueller C, Pieske B, Ponikowski P, Ristic A, Ruschitzka F, Seferovic PM, Skouri H, Zimmermann WH, Mebazaa A. Treatments targeting inotropy. Eur Heart J. 2018 in press
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Milton Packer, Christopher O’ Connor, John J.V. McMurray, Janet Wittes, William T Abraham, Stefan Anker, Kenneth Dickstein, Gerasimos Filippatos, Richard Holcomb, Henry Krum, Aldo P. Maggioni, Alexandre Mebazaa, Frank Peacock, Mark C. Petrie, Piotr Ponikowski, Frank Ruschitzka, Dirk J. van Veldhuisen, Lisa S. Kowarski, Mark Schactman, and Johannes Holzmeister, on behalf of the TRUE-AHF Investigators and Committees Effect of Ularitide on Cardiovascular. Mortality in Acute Heart Failure. N Engl J Med. 2017, 3761956-1964
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Morelli A, Ertmer C, Westphal M, Rehberg S, Kampmeier T, Ligges S, Orecchioni A, D'Egidio A, D'Ippoliti F, Raffone C, Venditti M, Guarracino F, Girardis M, Tritapepe L, Pietropaoli P, Mebazaa A, Singer M Effect of heart rate control with esmolol on hemodynamic and clinical outcomes in patients with septic shock: a randomized clinical trial. JAMA. 2013;310:1683-91
Cohen AT, Spiro TE, Büller HR, Haskell L, Hu D, Hull R, Mebazaa A, Merli G, Schellong S, Spyropoulos AC, Tapson V; MAGELLAN Investigators. Rivaroxaban for thromboprophylaxis in acutely ill medical patients. N

Engl J Med. 2013;368:513-23.

Active participation with the industry

Chairman or member of the Steering Committee of more than 15 phase II and III studies on heart failure. The most recent are: FROG-ICU (2015, data presented as Late Bracking Trial at the European Society of Intensive Care Medicine, 2015), TRUE-AHF (2016, data presented as Late Bracking Trial, in Rome at the European Society of Cardiology in August 2016).

Member of the Board or Senior Consultant of the following Medical and biotech companies:
- Sphyngotec (sphyngotec.com): I lead the program of assessing the prognostic value of plasma adrenomedullin in intensive care units; data are provided by the international FROG-ICU study (2200 patients). In addition, Adrenoss (600 septic shock patients, 1.5 Millions Euros) was finished in July 2016.
- Adrenomed (adrenomed.com): Chair of the Adrecizumab Program in humans (5 Millions Euros) with the objective of assessing benefits of antibodies against adrenomedulline in improving organ dysfunction in sepsis; a paper was published to recommend how to design phase II in sepsis Mebazaa A et al. Designing phase 3 sepsis trials: application of learned experiences from critical care trials in acute heart failure. J Intensive Care. 2016 31;4:24
- Magnisense: cardiovascular biomarker measured by microbeads, I helped raising 2 Millions Euros financed by BPI (Banque Publique d’ Investissement, Paris France)
- Epygon (epygon.com): minimally invasive mitral valve, member of the Board
- NeuroTronik Limited: assessing benefits of stimulations of vessels in heart failure, senior consultant

Co-owner of the following patents
- Post-partum hemorrhage score based on biomarkers (United States Patent Application 20130190585, French and World patent), licenced by Magnisense
- Calcium sensitisers for treating symptoms of venomous bites and stings Brevet (WO 2005/102347 A1)
- Biomarkers to diagnose Peripartum heart failure (Feb 2014)
- Non-invasive diagnosis of heart failure in ICU, 2 patents 2016.

For years, clinicians thought that AHF and its associated organ injury were due to reduced cardiac output. Several studies including a meta-regression of AHF trials using pulmonary artery catheter showed that cardiac output was rather preserved. When invasive hemodynamic was measured within few hours of admission for AHF in patients with acute dyspnea and with known low left ventricular ejection fraction, filling pressures of right and left ventricles were strikingly elevated. This confirms that acute pulmonary edema is related to striking increase in left atrial pressure. Increased filling pressure of the right ventricle demonstrated that patients with low left ventricular ejection fraction have also a striking congestion upstream the right ventricle. Despite striking biventricular congestion, cardiac output was preserved. In summary, congestion is the predominant clinical profile in most patients admitted with acute heart failure (AHF) and also the main mechanism of organ injury and impairment in those patients.
In AHF, injury and dysfunction of target organs such as heart, lungs, kidneys and/or liver are associated with increased risk for death. In recent years, it appeared that restoring organ function after decongestive therapies has been associated with a lower risk for post-discharge mortality. Treatment strategies that specifically prevent, reduce or reverse organ dysfunction remain to be identified and evaluated.
Defining adequate endpoints of decongestion is a major clinical challenge in AHF. Change in body weight is often used as a guide, but this approach is frequently inadequate as body weight is not increased in all patients and does not reflect congestion caused by vascular-type fluid redistribution. Novel biomarkers to achieve decongestion are needed. We recently identified the endothelial marker CD146 that is released by

vascular stretch. Circulating CD146 was correlated in several cohorts to the size of inferior vena cava. Furthermore, in dialysed patients, changes in volemia between dialysis were correlated to changes in circulating CD146.
The treatment of congestion, especially acute pulmonary oedema remains largely opinion-based as there is a general lack of robust evidence to guide therapy. Yet, managing patients with AHF remains a clinical challenge and current therapies have uncertain impacts on long-term morbidity and mortality. The use of therapies that prevent or reverse congestion-induced organ injury may represent a strategy to reduce subsequent organ impairment and morbidity that is more successful than the traditional approach of targeting dyspnoea relief.

海外招請講演

[IL(E)21] 海外招請講演21

座長:大嶽 浩司(昭和大学医学部麻酔科学講座)

Sun. Mar 3, 2019 11:15 AM - 12:05 PM 第5会場 (国立京都国際会館1F Room D)

[IL(E)21] The challenge of medical artificial intelligence

Leo Anthony Celi （MIT Laboratory for Computational Physiology／Beth Israel Deaconess Medical Center, USA）

(Sun. Mar 3, 2019 11:15 AM - 12:05 PM 第5会場)

[IL(E)21] The challenge of medical artificial intelligence

Leo Anthony Celi （MIT Laboratory for Computational Physiology／Beth Israel Deaconess Medical Center, USA）

【 同時通訳付き】

Leo Anthony Celi MD MS MPH has practiced medicine in three continents, giving him broad perspectives in healthcare delivery. As clinical research director and principal research scientist at the MIT Laboratory for Computational Physiology (LCP), and as an attending physician at the Beth Israel Deaconess Medical Center (BIDMC), he brings together clinicians and data scientists to support research using data routinely collected in the process of care. His group built and maintains the public-access Medical Information Mart for Intensive Care (MIMIC) database, which holds clinical data from over 60,000 stays in BIDMC intensive care units (ICU). It is an unparalleled research resource; close to 10,000 investigators from more than 70 countries have free access to the clinical data under a data use agreement. In 2016, LCP partnered with Philips eICU Research Institute to host the eICU database with more than 2 million ICU patients admitted across the United States. Leo also founded and co-directs Sana, a cross-disciplinary organization based at the Institute for Medical Engineering and Science at MIT, whose objective is to leverage information technology to improve health outcomes in low- and middle-income countries. He is one of the course directors for HST.936 – global health informatics to improve quality of care, and HST.953 – collaborative data science in medicine, both at MIT. He is an editor of the textbook for each course, both released under an open access license. The textbook “Secondary Analysis of Electronic Health Records” came out in October 2016 and was downloaded more the 100,000 times in the first year of publication. The Mandarin translation of the textbook will be released by the end of the year, and a Spanish translation is in the works. The massive open online course HST.936x “Global Health Informatics to Improve Quality of Care” was launched under edX in February 2017. Finally, Leo has spoken in 25 countries about the value of data in improving health outcomes

Medicine presents a particular problem for creating artificial intelligence (AI) because the issues and tasks involved are often neither clearly defined nor black and white. In harsher terms, it is particularly difficult to create ‘artificial’ intelligence when there are still disagreements about concept definitions, what processes are important, and at times, even what outcomes are desirable. Medicine is a surprisingly subjective endeavor whereas valid and useful AI requires not only reliable, unbiased, and extensive data, but also objective (and similarly, unbiased) definitions and objectives. It makes sense that the early successes in AI applications in healthcare are in the field of image recognition. But image recognition in medicine is a low-hanging fruit. Where we need assistance is in the day-to-day complex decision-making that requires data synthesis and integration, tasks we now approach with what is referred to as clinical intuition. This process is notoriously riddled with cognitive biases and typically based on large information gaps, but nonetheless generally accepted as representing the ‘art’ of medicine. Resolving the subjectivity of medicine with the objectivity required for digitization and the secondary creation of AI first involves resolution of a number of questions: What do we want to do? What do we need to do? What can we do?