



INTERNATIONAL SYMPOSIUM OF INTENSIVE CARE AND EMERGENCY MEDICINE

THURSDAY, MARCH 11

SYMPOSIUM NEWS

Weather



Are current antibacterial treatment algorithms for Gram-positive VAP effective? A structured debate Thursday 11 March, 12.30-13.30.

Silver Hall, Level 0. Lunch will be provided.

Sponsored by Astellas Pharma Europe Ltd., this session features a distinguished international faculty.

Chair:

Professor Jean Chastre

Debaters:

Professor Tobias Welte

Professor Marin Kollef

Alkaline Phosphatase: A New Treatment for Sepsis-induced Kidney Failure?



Sepsis is a common complication in ICU patients and associated with high mortality rates. Twenty to sixty percent of patients with sepsis develop acute kidney injury, for which the only therapy currently available is dialysis. In a session on sepsis and multiple organ failure, Dr Peter Pickkers presented the results of a phase II double-blind, randomized, placebo-controlled study on the safety and efficacy of alkaline phosphatase

as a treatment in patients with sepsis-related acute kidney injury. Thirty-six adult patients with sepsis and acute renal failure were included in the study; 16 were randomized to receive intravenous bovine alkaline phosphatase for 48 hours and 19 received placebo. The results demonstrated that treatment with alkaline phosphatase was associated with faster improvement and normalization of creatinine clearance, and effect that was sustained over the study period, and reduced need for dialysis or shorter duration of dialysis when needed (10 hours versus 34 hours, $p=0.04$). Treated patients also had shorter ICU stays and fewer needed mechanical ventilation. Although the exact mechanisms of action are unclear, Dr Pickkers mentioned several possibilities including the ability of this endogenous enzyme to detoxify lipopolysaccharide. In addition, although no studies have evaluated the effects of this on outcomes, renal alkaline phosphatase levels are decreased in patients with sepsis, making it possible that simple restoration to normal levels may be in part responsible for its beneficial effects

RCT: Friend or Foe?



With the surge of interest in evidence-based medicine over the past decade or so, the RCT has been promoted as providing the highest level of evidence for or against a particular intervention. In an interesting pro-con session, Drs Michael Matthay and Prof Jean-Louis Vincent presented opposing views on the role

the RCT has played in transforming critical care medicine. Both speakers agreed that the vast majority of RCTs in intensive care medicine have given neutral results and shown no outcome benefit of the intervention being tested. Dr Matthay believed that these negative results had benefited the field by preventing useless interventions from being pursued and by demonstrating that our understanding of underlying mechanisms was incorrect thus stimulating research and leading the way to the discovery of new therapies. He also noted that many negative trials have led to major changes in clinical practice, citing the recent SOAP dopamine versus norepinephrine trial as an example of a negative trial which is likely to impact daily practice. Prof Vincent, however, felt that negative randomized trials could result in an important concept being dismissed as useless, citing tight glucose control as an example. He discussed the possible reasons for the negative results, including issues of inadequate power and problems with study design.

He also highlighted the problem of heterogeneity noting that it is not surprising to see a neutral result if all critically ill patients are randomized to an intervention, as it will inevitably result in benefit for some and harm in others. He concluded by emphasizing that not all interventions can or should be tested by randomized trial and that other study types should be used instead of randomized trials wherever possible



Sixteenth Postgraduate Refresher Course

Cardiovascular and Respiratory Physiology Applied to Intensive Care Medicine

Faculty:
 Laurence Brochard (Orléans, France)
 Jacques Creteur (Brussels, Belgium)
 Daniel De Backer (Brussels, Belgium)
 Robert Knaflitz (Brussels, Belgium)
 Michael R. Pinsky (Pittsburgh, USA)
 Jean-Louis Vincent (Brussels, Belgium)

Université libre de Bruxelles
 Campus Erasme
 Avenue de Lennik 465 - B-1079 Brussels
 November 30 & December 1-2, 2010
 LIMITED PARTICIPATION: 60
www.intensive.org

Elizabeth Leonskaya
 Pianiste / Pianist

Tchaikovsky & Grieg

Jeudi / Donderdag, 11.03.2010, 20.00h/v
 Bozar, Salle Henry Le Bouffezal

Orchestre National de Belgique / Nationaal Orkest van België
 Directeur: Ludwig Tanzi, Concertmeester

More & Details for this program on www.bozar.be
 More on Elizabeth Leonskaya on www.elizabethleonskaya.com

Don't forget today's 30th Birthday Surprise: Come and sample some famous Belgian pralines in the Exhibition Area

What is The Optimal Treatment for Invasive Candidiasis in ICU Patients?

Selection of treatment strategies for invasive candidiasis was the topic of a thought-provoking satellite symposium yesterday. Sponsored by Astellas Pharma Europe Ltd., the symposium was chaired by Professor Thierry Calandra (Lausanne, Switzerland), who opened the session by outlining the key challenges faced in the treatment of these infections in the ICU.

Recognizing risk factors

The importance of early recognition of risk factors for invasive candidiasis was the topic of the first presentation, given by Professor Jean-Louis Vincent (Brussels, Belgium). The INTENSE study, which will examine the efficacy of micafungin as early treatment in patients with abdominal infection requiring surgery and ICU stay, was also covered.

Patient-based treatment

The second presentation, given by Professor George Dimopoulos (Athens, Greece), focused on treatment strategies for invasive candidiasis in ICU patients. For suspected or documented candidemia, echinocandins should be first-line treatment choices. Individual case characteristics are important when selecting an agent from within this class.

For more information on these topics, please visit the Astellas booth on Level -2.



Extracorporeal Gas Exchange to Replace Invasive Mechanical Ventilation?



Extracorporeal gas exchange refers to techniques that perform the gas exchange functions of the lung, thus potentially removing the need for invasive mechanical ventilation in patients with acute respiratory failure. Various techniques have been developed including extracorporeal membrane oxygenation and extracorporeal CO2 removal, generally used in combination with non-invasive mechanical ventilator techniques. By avoiding tracheal intubation and mechanical ventilation, Dr Antonio Pesenti suggested that these techniques could prevent the three 'evils' of mechanical ventilation: ventilator-associated pneumonia, ventilator-induced lung injury, and the heavy sedation often given to such patients. He presented some data supporting the feasibility of these techniques in patients with ARDS. Dr Nausherwan Burki then presented very preliminary data from a pilot study using extracorporeal CO2 removal in patients with hypercapnic respiratory failure due to acute exacerbation of COPD supporting its efficacy in these patients. The conclusions of this session were that extracorporeal gas exchange technology has undergone huge progress in the past 30 years, and holds huge promise for the future management of patients with acute respiratory failure



The substantial relevance of micro- and macrocirculation was the hot topic of the Interactive Satellite Symposium arranged by Fresenius Kabi. Together with the audience, Professor Mike James concluded that the rational approach to supporting macrocirculation is a balance between a crystalloid and a modern colloid. He also pointed out that the safety of modern HES is comparable to albumin for perioperative use, but less expensive, whilst large volumes of crystalloids increase complications.

Together with the attendees, Professor Can Ince worked out that convective and diffusive alterations of microcirculatory blood flow are the reason for reduced tissue oxygen availability in hypovolaemia, and that fluid therapy is effective in correcting this defect. There was also a consensus that colloids are superior to crystalloids when it comes to microcirculation.

Professor Mervyn Singer chaired the scientific event and emphasised the importance of a lively interaction between the audience and the speakers: "The exchange between the latest scientific findings and your great experience in clinical practice is crucial for progress in medicine." In his view, the interactivity at the Fresenius Kabi Symposium was not only exciting for the attendees, but also provided great insights into the latest developments in Volume Therapy.

Sepsis Biomarkers: Methodological Limitations



Sepsis can be difficult to diagnose, particularly in ICU patients who often have multiple ongoing disease processes and many of whom are already receiving antimicrobial therapy. Yet rapid diagnosis is crucial so that appropriate therapy can be started at an early stage of disease when it is likely to bring maximum benefit. Multiple compounds have been proposed as biomarkers, including acute phase proteins, cytokine levels, etc. However, as highlighted by Derek Angus in a session dedicated to sepsis biomarkers, there are many methodological problems that need to be considered when developing and using biomarkers. Although there are multiple biomarker candidates, most have undergone only rudimentary analysis. Most importantly, different biomarkers will have different uses in different situations, e.g., diagnosis, prognosis, therapeutic decision-making, and there is unlikely to be a single biomarker that works in all those situations. The purpose for which any biomarker is to be used therefore needs to be taken into consideration when assessing its value. What is being 'marked' also needs to be determined, e.g., infection versus sepsis versus organ failure versus death, as does the target population. When biomarker data and clinical data seem discordant, the biomarker should not necessarily be discarded as of no use but the two aspects could be combined, as is currently being done in trials of cancer therapeutics. Finally, Dr Angus stressed the importance of a theragnostic approach to biomarker development, needing to evaluate any biomarker in terms of its likely clinical application and ability to change clinical practice for the better.

This is just a small selection of the many sessions held yesterday.
For our full program visit www.intensive.org