JOINT EVENT

22nd Edition of International Conference on

Neonatology and Perinatology

&

3rd International Conference on

Pediatrics and Pediatric Surgery

May 07-08, 2018 Frankfurt, Germany

Keynote Forum

Day 1

Ryszard Lauterbach, J Pediatr Care, Volume 4
DOI: 10.21767/2471-805X-C2-007

Ryszard Lauterbach

Jagiellonian University, Poland

Non-activated protein C in treatment of neonatal sepsis

Background: Previously, we found that plasma protein C activity ≤10% significantly increased the probability of the occurrence of death during neonatal sepsis. Thus, if the activity of plasma protein C declined during the course of sepsis to ≤10%, we administered a non-activated protein C zymogen to increase a protein C activity. The aim of that retrospective analysis was to explore treatment effects of protein C zymogen (PC) supplementation in septic infants, with plasma protein C activity ≤10%.

Methods: A database was used to locate 85 newborns treated with PC from among 458 analyzed infants with confirmed sepsis.

Results: The median birth weight and gestational age of treated infants were, respectively 1010.0 g and 29 weeks. In 47 infants, early-onset sepsis (EOS) developed whereas in 38 neonates late-onset sepsis (LOS) was recognized. PC was given as a single dose of 200 IU/kg. Among 458 septic patients, death occurred in 19 newborns (4.2%), exclusively in infants with plasma protein C activity ≤10%. In 15 infants, death occurred in the course of EOS and 4 newborns died of LOS (EOS versus LOS; p=0.036; Chi-square with the Yates correction).

Conclusions: An increased risk of death in septic neonates with plasma protein C activity ≤10% suggests the necessity for its evaluation and possibility of supplementation of protein C zymogen.

Biography

Ryszard Lauterbach has completed his PhD and Postdoctoral studies from Jagiellonian University Medical College in Kraków. He is the Head of Department of Neonatology, Jagiellonian University Medical College and Vice-President of Polish Neonatal Society. He has published more than 75 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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Michael Stark, J Pediatr Care, Volume 4
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Michael Stark

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The evidence-based C-section and the risks involved in the exaggeration of its use

As most abdominal operations have endoscopic alternatives, caesarean section will remain the only abdominal operation in the future. Therefore it is of utmost importance to constantly evaluate the different steps for their necessity and for their optimal way of performance. The modified Joel-Cohen method results in a shorter incision to delivery time, lower rate of febrile morbidity compared to the traditional Pfannenstiel incision. Opening peritoneum using bi-digital stretching rather than sharp instruments proved to be safer, and exteriorization of the uterus makes stitching easier and avoids unnecessary bleeding. Suturing the uterus with one layer only results in stronger scars and reduced pain. Leaving both peritoneum layers open reduces adhesions. The fascia being sutured continuously with first knot underneath the fascia prevents irritation in the sub-cutis and by a right-handed surgeon, from the right to the left, proved to be ergonomic. Since the introduction of this modified and simplified method, it has been evaluated in dozens of peer-reviewed publications from different countries. Without exception, all showed various advantages of this method: shorter operation time, shorter hospitalization, quicker mobiliza¬tion, less blood loss, lower rate of febrile morbidity, lower costs, and less need for painkillers. Only 10 instruments and three sutures are needed, which simplifies the workload of nurses. In order to standardize this operation, it is important to use constantly the same needles and instruments. Big needle is necessary for the uterus, as fewer steps are done and therefore less foreign body reaction. This operation is recommended as universal routine method for caesarean section and its principles should apply to all surgical disciplines. Unfortunately, the rate of cesarean section is rising constantly around the world. As evolution continues, it might be influenced by this high rate. In this presentation, the logic of the need to limit the numbers of cesarean section based on anthropological studies will be presented.

Biography

Michael Stark specializes in Obstetrics and Gynecology and his main interest is Gynecological Oncology. He initiated the VIEZION project which combines targeted che-motherapy, PIF and stem-cell therapy for improving post-surgical oncological treatment. He is currently the Scientific and Medical Advisor of ELSAN, a 120 hospital group in France and is a guest Scientist at the Charite's University Hospital in Berlin. Since 2004 he has been the President of the New European Surgical Academy (NESA), an international inter-disciplinary surgical organization with members in 54 countries and a formal cooperation agreement with FIGO concerning transmission of knowledge to countries with limited resources. In 2011, he was nominated as the Medico Del Anno (Doctor of the Year) in Italy, and is an Honorary Member of the French, Polish, Russian and Italian Gynecological Associations. In the years 1983-2000 he was the Medical Director and Head of Ob/Gyn Department of the Misgav Ladach General Hospital in Jerusalem, and between 2001 and 2009 the chairman of all Ob/Gyn Departments of the HELIOS Hospital Group in Europe. He was the Scientific Director of the European novel tele-surgical system. He was visiting Professor at the Universities of Toronto, Moscow, Beijing, Milan, Adana, Uppsala and the Weill-Cornell University Hospital in New York. He modified operations like the vaginal and abdominal hysterectomy and cesarean section and developed the concept of single-entry natural orifice surgery. He was involved in the development of the trans-oral thyroidectomy and transdouglas abdominal surgery.

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Day 2

Taketoshi Yoshida, J Pediatr Care, Volume 4
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Taketoshi Yoshida

Toyama University Hospital, Japan

The effect of prematurity on caffeine metabolism in preterm infants

Caffeine is a methylxanthine and a first-line pharmacotherapy agent in apnea of prematurity. Caffeine is preferable to theophylline because of its fewer adverse effects and a wider therapeutic window. In general, measurement of serum caffeine concentration is not required in preterm neonates because a majority of them can maintain therapeutic levels. We present the first reported case of a preterm neonate, whose serum caffeine concentration exceeded therapeutic levels, resulting in rhabdomyolysis. Caffeine is metabolized by the hepatic cytochrome P-450 monooxygenase pathway, but its activity is lower in premature infants than in adults. Therefore, more than 85% of the administered dose of caffeine is recovered unchanged in the urine of an infant during the 1st month of life. Since we are interested in caffeine metabolism in preterm infants, we measured serum caffeine concentration in 24 preterm infants, sequentially. We addressed the relationship between caffeine metabolism and postnatal age or postmenstrual age. Our aim is to elucidate the development and systems of caffeine metabolism according to their growth. Although caffeine has been used in many NICUs, I would like to discuss caffeine metabolism in preterm infants.

Biography

Taketoshi Yoshida graduated from Toyama Medical and Pharmaceutical University and got medical license in 1994. He has completed his PhD in 2002 from Toyama University. He has performed genetic research work at Institute for Virus Research, Kyoto University and German Rheumatism Research Centre, Berlin. He is the Director of Maternal and Perinatal Center, Toyama University Hospital. He focuses on the neonatal basic and translational research at present.

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Sajjad ur Rahman, J Pediatr Care, Volume 4
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Sajjad ur Rahman

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Neuroprotective therapies for neonatal hypoxic ischemic encephalopathy – update 2018

Perinatal asphyxia remains a major cause of neonatal mortality and morbidity even in the most technologically advanced and prosperous countries. The incidence remains unchanged at 1-2% of live births in the developed countries. The incidence is much higher in developing countries. Until recent years, the management of hypoxic ischemic encephalopathy (HIE) was limited to supportive intensive care only because there was no specific treatment available to rescue neurons during HIE. However, over the last decade, moderate therapeutic hypothermia (33.5-34.5□), offered during the first 72 hours of life, has emerged as a promising new therapy in reducing neonatal mortality and morbidity due to HIE. Recently published large multicenter RCT's and meta-analyses including Cochrane meta-analysis 2013, have provided sufficient evidence on the safety and neuroprotective efficacy of this new therapy. Among the Neonatal Intensive Care Units (NICU) in the developed world, therapeutic hypothermia has now become a standard of care for asphyxiated term infants. The current evidence has proved that therapeutic hypothermia (TH) can provide up to 30% neuroprotection. Additional neuroprotection may be achieved by using pharmacologic therapeutic agents in combination with hypothermia. These potential therapeutic agents include xenon, erythropoietin, magnesium sulphate, allopurinol, opioids, topiramate, inhaled nitric oxide (iNO), N-acetylcysteine, minocycline and melatonin. Due to their different mechanisms of action, it is likely that these neuroprotective therapies may add incrementally to the proven beneficial effects of hypothermia. It is plausible that hypothermia may buy additional time for these neuroprotective agents to act within an expanded therapeutic window. Currently a number of clinical trials are comparing a combination of TH and a pharmacologic agent with TH alone. The preliminary results of these trials have started appearing in the medical literature. The presentation will review the current status of TH and preliminary results of these hypothermia plus neuroprotective therapies. The presentation will also include the way forward for resource constrained developing countries which have the highest number of babies born with perinatal asphyxia.

Biography

Sajjad ur Rahman is currently working as Clinical Director of NICU in Sulaiman Al Habib Hospital, Al Qassin, Saudi Arabia. He worked as Professor and Chairman Department of Pediatrics at Peshawar Medical College, Peshawar, Pakistan. He also worked as Senior Consultant Neonatal Perinatal Medicine and Neurodevelopmental Pediatrics in Hamad Medical Corporation and Associate Professor of Clinical Pediatrics at Weill Cornell Medical College in Doha State of Qatar from 2008 till 2015. He did his FCPS (Pediatrics) from Pakistan and FRCPCH from UK where he trained in Neonatology and Neurodevelopmental Pediatrics. He did his Fellowship in Neonatal Perinatal Medicine from The Hospital for Sick Children, University of Toronto, Canada. He worked as Consultant Neonatologist in UK from 2001-2007. He has contributed a number of international publications, a book chapter on Neonatal Mortality and its correlates and has recently published a book titled "*Neonatal and Perinatal Mortality, Global challenges, Risk factors and Interventions*". He initiated and has been leading his own MRCT Mag Cool Study. He is currently on the Editorial Board of *Journal of Clinical Neonatology* (JCN) and *World Journal of Obstetrics and Gynecology* and a reviewer for a number of international journals.

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