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JOINT MEETING ESPA-SPA

ESPA CONGRESS GENEVA

in cooperation with
the Swiss Society for Paediatric Anaesthesia (SGKA-SSAP)

ESPA
EUROPEAN SOCIETY
FOR PAEDIATRIC ANAESTHESIOLOGY

5TH-7TH SEPTEMBER 2013

SWITZERLAND

Geneva

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ESPA
European Society
for Paediatric Anaesthesiology

S.A.R.N.e P.I.
Società di Anestesia e Rianimazione
Neonatale e Pediatrica Italiana

ESPA EUROPEAN CONGRESS OF PAEDIATRIC ANAESTHESIOLOGY 2012

16° CONGRESSO SARNEPI

20th-22nd SEPTEMBER 2012

PALAZZO DEI CONGRESSI,
STRESA (VERBANIA) ITALY

Stresa

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CITTÀ DI STRESA

AAROI EMAC

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PROGRAMME

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WELCOME FROM THE PRESIDENT OF ESPA

Dear colleague,

After more than one year of careful planning it is time to welcome you to the Annual Congress of the European Society for Paediatric Anaesthesiology here in Stresa!

Ida Salvo and her team on the local organizing committee have worked tirelessly to arrange this meeting together with our local hosts, the Società di Anestesia e RianimazioneNeonatale e PediatricaItaliana (SARNePI), and you will notice that the congress has a distinct Italian flavour. Not only will you see this reflected in the landscape, the cuisine and hopefully the weather, but also in the programme as we are holding for the first time a session in Italian. But the ESPA congress remains very much a European meeting and we are very honoured to welcome as co-hosts of joint session the European Association of Cardiothoracic Anaesthesiologists (EACTA), the European Society of Paediatric and Neonatal Intensive Care (ESPNIC) and the European Resuscitation Council (ERC).

In drawing up the programme Neil Morton and the Scientific Committee have taken a fresh look at what is current, controversial and problematic in paediatric anaesthesia and have gathered the best experts from all over our continent and elsewhere to discuss these.

ESPA is a very inclusive society which focuses equally on the needs of the specialist paediatric anaesthesiologist and the generalist. We are confident that we can meet these various needs during the many parallel sessions of this, our most ambitious congress to date. As always our aim in bringing you this congress is to improve the quality and safety of anaesthetic services for children in the widest sense of the word. There will be sessions dealing with perioperative care, emergency medicine, intensive care and pain therapy.

We are also looking to the future and encouraging the next generation of paediatric anaesthesiologists to take full part in the scientific programme. We will again be awarding the ESPA-prizes for the best free paper presentation and for the best poster targeted at younger anaesthesiologists and trainees to encourage them to undertake research which can further improve the quality of our care.

This year's location is truly amazing. Make sure you find the time in the evenings to explore the charming town of Stresa and the stunning area around the Lago Maggiore. We are taking full advantage of what the region has to offer during the welcome reception and the ESPA annual dinner.

Finally the trade exhibition will be one of the best at which you can take note of new developments in drugs and equipment and exchange ideas with colleagues and representatives of the industry.

It's nice to see you in Stresa !

Nigel Turner
President ESPA

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WELCOME FROM THE CHAIR OF THE LOC

Dear Colleagues, Cari Colleghi,

Benvenuti a Stresa!

On behalf of the Italian LOC and SARNePI executive board, it is a great pleasure to welcome you to the annual ESPA and SARNePI Congress (STRESA 2012).

We chose for you as site of this international educational and scientific meeting a unique landscape, a small town on a beautiful lake to favour further friendships and strengthen scientific collaboration.

We really hope this meeting in our Country will be a memorable experience for all of you.

Ida Salvo

Chair of the Local Organizing Committee
Past President SARNePI

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Società di Anestesia e Rianimazione Neonatale e Pediatrica Italiana

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WELCOME FROM THE SCIENTIFIC COMMITTEE

Dear colleague,

As you can see in the programme, a prominent feature of the annual ESPA congress "Stresa 2012" is a time table with 5 parallel sessions, which reflects ESPA's increasing emphasis on small group teaching opportunities with the best experts as tutors. By clicking on a time slot in the interactive time-table, you will see detailed information on the speaker, the content of the session and the key learning points in advance of the congress. This information will be updated in the coming months and will enable you to choose between the 45 lectures and workshops.

We want to stimulate participation by delegates and you will see a range of ways of achieving this from simulation to debates, from case-based discussions to workshop-style sessions. Each person learns best in a different way so I hope you will see the whole range of educational opportunities in this year's programme. We also appreciate your feed-back about how you find these teaching and learning formats and so we will be encouraging you to complete the feedback questionnaire throughout the meeting.

By clicking on a time slot in the interactive timetable, you will see detailed information on the speaker, the content of the session and the key learning points in advance of the congress. This information will be updated in the coming months and will enable you to choose between the 45 lectures and workshops.

At any time you may contact me in my position as Chairman of the ESPA Scientific Committee on neilmorton@mac.com to suggest topics, speakers and formats for future meetings. We are already planning the programme for 2014 and we need to know what you want and need.

So enjoy ESPA 2012 in wonderful Stresa!

Neil S Morton
Chairman, ESPA SciCom

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Società di Anestesia e Rianimazione Neonatale e Pediatrica Italiana

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FACULTY LIST

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GATTINONI Luciano, Milan (IT)
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HANSEN Tom, Odense (DK)
HARTREY Rachel ,Southampton (UK)
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MOLINARO Silvana, Brescia (IT)
MORTON Neil, Glasgow (UK)
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Thursday **20th September**

	9.00	9.30	10.00	10.30	11.00	11.30	12.00	12.30	13.00	13.30	14.00	14.30	15.00		15.30	16.00	16.30	17.00	17.30	18.00	18.30
Room: STRESA									Opening remarks	ESPA ERC symposium		State of the art: update on ILCOR		Coffee break	Blood transfusion symposium		State of the art : Thromboprophylaxis in paediatrics				
Room: ISOLA BELLA															Safeguarding & child protection seminar (limited to 25 participants)						
Room: ISOLA PESCATORI															MEPA WS (limited to 15 participants)						
Room: ISOLA MADRE															Airway WS (limited to 20 participants)						
Room: SANTA CATERINA															Ultrasound in regional anaesthesia WS (limited to 20 participants)						

Friday **21st September**

	9.00	9.30	10.00	10.30	11.00	11.30	12.00	12.30	13.00	14.00	14.30	15.00	15.30	16.00	16.30	17.00	17.30	18.00	18.30
Room: STRESA	Free papers: ESPA prize			Coffee break: poster walk-around	Symposium ESPA Projects			State of the art	Lunch: poster walk-around	ESPA ESPNIC symposium			Coffee break	ESPA General Assembly					
Room: ISOLA BELLA	Communication skills WS (limited to 20 participants)				Safe limits of blood pressure seminar					Awake regional anaesthesia WS (limited to 20 participants)				Communication skills WS (limited to 20 participants)					
Room: ISOLA PESCATORI	Safeguarding & child protection seminar (limited to 25 participants)				Italian language session					MEPA WS (limited to 15 participants)				Why do we need collaborative trials?				SARNePI General Assembly	
Room: ISOLA MADRE	Airway WS (limited to 20 participants)				Consent & risk seminar		Sedation seminar			Ventilatory support seminar				Ventilatory support seminar					
Room: SANTA CATERINA	Ultrasound in regional anaesthesia WS (limited to 20 participants)				Ultrasound in emergency/critical care WS (limited to 20 participants)					Ultrasound in vascular access WS (limited to 20 participants)				Ultrasound in emergency/critical care WS (limited to 20 participants)					

Saturday **22nd September**

	9.00	9.30	10.00	10.30	11.00	11.30	12.00	12.30	13.00	13.30	14.00	14.30	15.00		15.30	16.00	16.30	17.00	17.30	18.00	18.30
Room: STRESA	ESPA-EACTA symposium			Coffee break	Anaesthesia & the developing brain symposium		ESPA Guest Lecture														
Room: ISOLA BELLA	Awake regional anaesthesia WS (limited to 20 participants)				Sedation seminar																
Room: ISOLA PESCATORI	Fluid management seminar				Case based discussions																
Room: ISOLA MADRE	Pediatric Anesthesia Journal Symposium				Case based discussions																
Room: SANTA CATERINA	Analgesics in Children			Ultrasound in vascular access WS (limited to 20 participants)																	

Symposium | State of the art | Workshop WS | Free papers | Italian language session | Seminar | Case based discussion

Thursday **20th September**

Room: STRESA

13.00-13.30 Opening remarks

13.30-15.00 **ESPA ERC symposium**

Chairpersons
Nigel Turner,
Dominique Biarent

- Oxygen and neonatal anaesthesia:
  Bob Bingham
- Pro-con debate: Oxygen in resuscitation causes more harm than good
  Pro: ***Torsten Lauritsen***
  Con: ***Petra Lemmers***

State of the art:
- Update on ILCOR and new developments in resuscitation
  Dominique Biarent

15.00-15.30 *Coffee break*

15.30-17.00 **Blood transfusion symposium**

Chairperson
Francis Veyckemans

- Transfusion of blood and blood products
  Bogumila Gebicka
- Minimising blood transfusion
  Rachel Hartrey

State of the art:
- Thromboprophylaxis in paediatrics
  Matthew Checketts

Room: ISOLA BELLA

15.00-15.30 *Coffee break*

15.30-17.00 **Safeguarding & child protection seminar**
(limited to 25 participants)
Leaders
Kathy Wilkinson,
Ingrid Russel

Room: ISOLA PESCATORI

15.00-15.30 *Coffee break*

15.30-17.00 **MEPA WS**
(limited to 15 participants)
Leader ***Pauline Cullen,***
co-tutors ***Mark Thomas,***
David deBeer

Room: ISOLA MADRE

15.00-15.30 *Coffee break*

15.30-17.00 **Airway WS**
(limited to 20 participants)
Leader ***Josef Holzki,***
co-tutors ***Simonetta Baroncini,***
Lorenzo Mirabile

Room: SANTA CATERINA

15.00-15.30 *Coffee break*

15.30-17.00 **Ultrasound in regional anaesthesia WS**
(limited to 20 participants)
Leader ***Steve Roberts,***
co-tutors ***Martin Schmidt,***
Giorgio Ivani

Symposium
State of the art
Workshop WS
Free papers
Italian language session
Seminar
Case based discussion

Friday 21st September

Room: STRESA		Room: ISOLA BELLA	
09.00-10.30	Free papers: ESPA prize Chairperson ***Karin Becke***	09.00-10.30	**Communication skills WS** (limited to 20 participants) Chairperson ***Andreas Machotta***
10.30-11.00	*Coffee break: poster walk-around*	10.30-11.00	*Coffee break: poster walk-around*
11.00-12.30	**Symposium ESPA Projects** Chairperson ***Nigel Turner*** • Implementing guidelines ***Karin Becke*** • Defining competencies for neonatal anaesthesia ***Kerstin Sandström*** • A competent anaesthetic service for children ***Neil Morton***	11.00-12.30	**Safe limits of blood pressure seminar** Chairperson ***Bob Bingham*** • For anaesthesia ***Ton Schouten*** • In NICU ***Petra Lemmers*** • Is there still a place for hypotensive anaesthesia in paediatrics? ***Bogumila Gebicka***
12.30-13.00	**State of the art**: Chairperson ***Nigel Turner*** • What every anaesthesiologist needs to know about muscle diseases? ***Francis Veyckemans***		
13.00-14.00	*Lunch: poster walk-around*	13.00-14.00	*Lunch: poster walk-around*
14.00-15.30	**ESPA ESPNIC symposium** Chairpersons ***Ida Salvo, Jan Hazelzet*** • Paediatric sepsis guidelines ***Stephen Clement de Clety*** • How can the new Sepsis Survey Campaign Guidelines be adapted to children ***Massimo Antonelli*** • Paediatric sepsis trials- What we have learned from the past? ***Jan Hazelzet*** • Genetic differences in paediatric sepsis ***Simon Nadel***	14.00-15.30	**Awake regional anaesthesia WS** (limited to 20 participants) Leader ***Nicola Disma*** Co-tutors ***Pablo Ingelmo, Graham Bell***
15.30-16.00	*Coffee break*	15.30-16.00	*Coffee break*
16.00-17.30	**ESPA General Assembly**	16.00-17.30	**Communication skills WS** (limited to 20 participants) Chairperson ***Andreas Machotta***

Room: ISOLA PESCATORI		Room: ISOLA MADRE		Room: SANTA CATERINA	
09.00-10.30	**Safeguarding & child protection seminar** (limited to 25 participants Leaders ***Kathy Wilkinson, Ingrid Russel***	09.00-10.30	**Airway WS** (limited to 20 participants) Leader ***Josef Holzki.*** Co-tutors ***Simonetta Baroncini, Lorenzo Mirabile***	09.00-10.30	**Ultrasound in regional anaesthesia WS** (limited to 20 participants) Leader ***Steve Roberts*** Co-tutors ***Martin Schmidt, Giorgio Ivani***
10.30-11.00	*Coffee break: poster walk-around*	10.30-11.00	*Coffee break: poster walk-around*	10.30-11.00	*Coffee break: poster walk-around*
11.00-13.00	**Italian language session** Chairpersons ***Nicola Zadra, Silvana Molinaro*** • TIVA in neonates ***Marina Sammartino*** • Brain monitoring ***Marinella Astuto*** • Is it always necessary to reverse muscle relaxants? ***Bruno Locatelli*** • NAVA ventilation in neonates ***Federica Ferrero*** • Hypothermia in cardiac arrest and trauma ***Sergio Picardo***	11.00-12.00	**Consent & risk practice seminar** Chairpersons ***Kathy Wilkinson, Steve Roberts*** • Good practice ***Kathy Wilkinson*** • Consent and regional anaesthesia ***Steve Roberts*** • Discussion: Consent dilemmas	11.00-12.30	**Ultrasound in emergency/ critical care WS** (limited to 20 participants) Tutors ***Enrico Storti, Luca Neri, Tortsen Lauritsen***
		12.00-13.00	**Sedation seminar** Chairperson ***Mike Sury*** Co-tutors ***Andrea Messeri, Fabio Borrometi***		
13.00-14.00	*Lunch: poster walk-around*	13.00-14.00	*Lunch: poster walk-around*	13.00-14.00	*Lunch: poster walk-around*
14.00-15.30	**MEPA WS** (limited to 15 participants) Leader ***Pauline Cullen*** Co-tutors ***Mark Thomas, David deBeer***	14.00-15.30	**Ventilatory support** Chairperson ***Edoardo Calderini*** • Non-invasive ventilation in children: indications and contraindications ***Edoardo Calderini*** • How to ventilate children with chronic respiratory failure ***Fabrizio Racca*** • Optimising NIV in pediatric patients ***Giorgio Conti***	14.00-15.30	**Ultrasound in vascular access WS** (limited to 20 participants) Leader ***Ehrenfied Schindler*** Tutors ***Christian Breschan, Thierry Pirotte***
15.30-16.00	*Coffee break*	15.30-16.00	*Coffee break*	15.30-16.00	*Coffee break*
16.00-17.30	**Why do we need collaborative trials?** Chairperson ***Andrew Davidson*** • The GAS Study ***Andrew Davidson*** • The SLEEPS study ***Andy Wolf*** • Pain at home initiative ***Graham Bell***	16.00-17.30	**Ventilatory support** Chairperson ***Edoardo Calderini*** • Non-invasive ventilation in children: indications and contraindications ***Edoardo Calderini*** • How to ventilate children with chronic respiratory failure ***Fabrizio Racca*** • Optimising NIV in pediatric patients ***Giorgio Conti***	16.00-17.30	**Ultrasound in emergency/ critical care WS** (limited to 20 participants) Tutors ***Enrico Storti, Luca Neri, Tortsen Lauritsen***
17.30-18.30	**SARNePI general assembly**				

Symposium
State of the art
Workshop WS
Free papers
Italian language session
Seminar
Case based discussion

Saturday 22nd September

Room: STRESA

09.00-10.30 **ESPA-EACTA symposium**
Chairpersons
Ehrenfried Schindler, Marco Ranucci

- Paediatric heart failure: Diagnosis & Pharmacological support
  Marco Ranucci
- Lung dyshomogeneity and consequences for mechanical ventilation
  Luciano Gattinoni
- Who is the best candidate for a new pediatric cardiac anaesthesia program?
  a. A pediatric anesthesiologist attending a specific training in cardiac anaesthesia
  Greg Hammer
  b. An adult cardiac anesthesiologist attending a specific training in pediatric anaesthesia
  Matthias Mueller

10.30-11.00 *Coffee break*

11.00-12.00 **Anaesthesia & the developing brain symposium**
Chairpersons
Tom Hansen, Nigel Turner

- Mechanisms of neurotoxicity of anaesthetic agents
  Andrew Davidson
- Protecting against neurotoxicity
  Nicola Disma
- What should we say to parents?
  Tom Hansen

12.00-13.00 **ESPA Guest Lecture**
How can epidemiology help answer concerns about neurotoxicity?
Kaare Christensen

Room: ISOLA BELLA

09.00-10.30 **Awake regional anaesthesia**
(limited to 20 participants)
Leader ***Nicola Disma***,
co-tutors ***Pablo Ingelmo, Graham Bell***

10.30-11.00 *Coffee break*

11.00-12.00 **Sedation seminar**
Chairperson
Mike Sury
Co-tutors ***Andrea Messeri, Fabio Borrometi***

Room: ISOLA PESCATORI

09.00-10.30 **Fluid management seminar**
Chairpersons
Karin Becke, Andrea Moscatelli, Christoph Eich

- How I do a case of pyloric stenosis?
  Karin Becke
- What do I do if a child is having hyponatraemic seizures?
  Andrea Moscatelli
- European Multicenter Study with HES in balanced colloids?
  Christoph Eich

10.30-11.00 *Coffee break*

11.00-12.00 **Case based discussions**
(see detailed case based programme at page 39)

Room: ISOLA MADRE

09.00-10.30 **Pediatric Anesthesia Journal Symposium**
Chairperson
Neil Morton

- How to review a paper
  Tom Hansen
- Editor's choice of the best papers 2011
  Greg Hammer
- Q&A with the editors

10.30-11.00 *Coffee break*

11.00-12.00 **Case based discussions**
(see detailed case based programme at page 39)

Room: SANTA CATERINA

09.00-10.30 **Analgesics in Children**
Chairperson
Andrea Messeri

10.30-12.00 **Ultrasound in vascular access WS**
(limited to 20 participants)
Leader ***Ehrenfied Schindler***
Co-tutors ***Christian Breschan, Thierry Pirotte***

- Symposium
- State of the art
- Workshop WS
- Free papers
- Italian language session
- Seminar
- Case based discussion

19th September	09.00 - 13.00	**BLU ROOM (2nd floor)** ESPA EXECUTIVE BOARD
	14.00 - 17.00	**BLU ROOM (2nd floor)** ACORNS MEETING
20th September	09.30 - 10.30	**ESPA ROOM (-1th floor)** GENEVA 2013 MEETING
	11.00 - 13.00	**ESPA ROOM (-1th floor)** ESPA AND QUIPSI
	11.00 - 12.00	**BLU ROOM (2nd floor)** GAS EXECUTIVE MEETING
21st September	12.30 - 14.00	**BLU ROOM (2nd floor)** GAS GENERAL MEETING
22nd September	11.00 - 12.00	**SARNePI OFFICE (ground floor)** GRUPPO DI STUDIO TIP.net
	11.00 - 12.00	**BLU ROOM (2nd floor)** GRUPPO DI STUDIO Trauma Cranico Pediatrico

LECTURES-WORKSHOPS

S.A.R.N.e P.I.
Società di Anestesia e Rianimazione Neonatale e Pediatrica Italiana

ESPA
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ROOM : STRESA
13.30 - 15.00
ESPA ERC symposium

Oxygen and neonatal anaesthesia: Bob Bingham

Oxygen is a fascinating element, which has captivated scientists and artists since its initial discovery by Joseph Priestly in 1775. Oxygen is clearly essential to life and has been eulogised in science and literature.
Oxygen is essential in cellular metabolism, as it accepts electrons passed down the cytochrome chain in the mitochondria during the formation of high-energy phosphates and is itself reduced to water. This chemical reactivity can however have negative consequences. In the 19th Century, aChristian Fredrich Schönbein noted that ozone (O3), one of a number of reactive oxygen species (ROS), was formed by lightning discharge during thunderstorms. In the human body, these ROS can have adverse effects and this is especially important in neonates, particularly those born prematurely. ROS have been implicated in the genesis of bronchopulmonary dysplasia, in toxicity to the developing nervous system and they have even been blamed for the later development of leukaemia. The theories of causation and the evidence for and against these theories will be explored in the lecture.
Retinopathy of prematurity is a well-known consequence of exposure to oxygen and to fluctuations in oxygen levels, although it is not necessarily directly related to ROS. The causes, identification, classification and treatment of this condition will be discussed and strategies for avoiding it elucidated.
100% oxygen has been traditionally used in resuscitation but this use has been challenged recently for resuscitation at birth. The latest recommendations from the International Liaison Committee on Resuscitation and the European Resuscitation Council have advocated commencing resuscitation at birth with air, only adding oxygen if SpO2 readings do not respond appropriately. Some of background for this recommendation will be presented to supplement the following debate.
After this session, the participants will have an understanding of

- The role of oxygen in metabolism
- The mechanisms of oxygen toxicity in neonates
- Clinical implications and strategies for the safe use of oxygen in this age group

Pro-con debate: Oxygen in resuscitation causes more harm than good
Pro: Torsten Lauritsen Con: Petra Lemmers

Oxygen is necessary for aerobic energy production. Cellular metabolism is normally aerobic but, in the face of the inadequate delivery of oxygen (because of poor cardiac output, decreased oxygen carrying capacity or lack of adequate inspired oxygen), cells switch to anaerobic metabolism in which energy production still occurs but metabolism is incomplete and lactic acid is produced. If this state is sufficiently short-lived, and the 'oxygen debt' is rapidly repaid, no harm may be done. If energy failure continues for long enough depolarisation occurs, quickly followed by cell death. However, sub-lethal hypoxic ischemia will often set in motion a series of toxic reactions that result in the later death of mildly affected and many initially unaffected cells.
Oxidative metabolism and other oxidative pathways however also yield by-products (reactive oxygen species (ROS) and free radicals) that can be toxic. Accordingly, cells have numerous anti-oxidant strategies/molecules to quench reactive oxygen species. Normoxia and even brief hyperoxia is efficiently managed by these protective mechanisms under physiologic conditions. During reperfusion from hypoxia-ischemia the cellular management of oxygen is disrupted and the increased production of toxic oxygen by-products as free radicals can overwhelm the protective mechanisms within the cell and cause damage to cell membranes, proteins, and DNA (reperfusion injury). This is especially the case in (preterm) neonates with limited and immature anti-oxidative defense mechanisms. ROS-mediated reperfusion injury is a well-documented and accepted cause of injury and numerous anti-oxidant strategies have been tested. One theoretic and controversial approach is to limit the amount of oxygen available during reperfusion to sufficient, but not excessive, oxygen. Determining the threshold for excessive oxygenation is obviously problematic.
Cardiac arrest in children is most often secondary to hypoxemia rather than a result of cardiac disease as in adults. The pathophysiological and cellular mechanisms are also different from neonatal asphyxia and it is controversial to assume that brief exposure to oxygen during resuscitation of a paediatric hypoxemic cardiac arrest will be harmful.
This session will present the pro's and con's of oxygen administration during resuscitation in neonates and older infants.
After this session participants will be able to understand:

1. The limitations of measuring oxygen saturation to judge oxygenation of the tissue (especially the brain) during resuscitation
2. The rationale for preventing hyperoxemia and hypoxemia.
3. The pathofysiological pathways after hypoxemia/hyperoxemia
4. The differences in coping with different concentrations of oxygen during resuscitation between (preterm), neonates, and children

State of the art: Update on ILCOR and new developments in resuscitation: Dominique Biarent

ILCOR (International Liaison Committee on Resuscitation) includes representatives
from the American Heart Association, the European Resuscitation Council, the Heart and Stroke Foundation of Canada, the Australian and New Zealand
Committee on Resuscitation, Resuscitation Council of Southern Africa, the InterAmerican Heart Foundation and the Resuscitation Council of Asia. Every five years, ILCOR identifies and reviews science and knowledge relevant to cardiopulmonary resuscitation and emergency cardiovascular care. The published document (Consensus of Sciences and Treatment Recommendation) includes all responses necessary to treat sudden life-threatening events affecting the cardiovascular and respiratory systems, with a particular focus on sudden cardiac arrest.
The ILCOR Paediatric task force reviews changes and issues of Paediatric life support., including Paediatric basic and advanced life support as well as post-cardiac arrest recommendations.
Use of Medical Emergency team, assessment of cardiac arrest with pulse check, CPR, chest compression / ventilation ratio, management of ventilation, defibrillation, AED, post-cardiac arrest care will be discussed.

15.30 - 17.00
Blood transfusion symposium

Transfusion of blood and blood products: Bogumila Gebicka

Few concepts in medicine evolved more than those concerning blood transfusion. Doctors who treated combat casualties during the Vietnam war strongly believed in the advantages of the whole blood transfusion. The onset of the AIDS epidemics changed our attitude towards blood transfusion: fresh blood became unavailable, the transfusion threshold was significantly lowered and based on the haemoglobin concentration only, and a profound haemodilution was accepted even in the bleeding patients, as long as the tissue perfusion seemed to be preserved.
Better understanding of the trauma-induced coagulopathy, and the implementation of the massive transfusion protocols, which encompasses transfusion management and other patient care needed to mitigate the "lethal triad" of acidosis, hypothermia and coagulopathy, decreased mortality of the severely traumatized patients. Earlier and more aggressive transfusion intervention and resuscitation with blood components that approximate whole blood is an important part of this approach. Because of the smaller circulation blood volume, traumatized children may fulfill the criteria of "massive blood transfusion" earlier that adults, and the application of the "massive transfusion protocol" may need to be considered.
The rationale of using blood substitutes and blood products in different clinical situations, including trauma, will be discussed

Minimising blood transfusion: Rachel Hartrey

The transfusion of blood products when used appropriately may reduce morbidity and mortality. Unfortunately however they may also result in adverse reactions that on occasion can prove fatal. Worryingly in children the majority of these adverse reactions occur due to an error i.e. receiving the wrong blood product or incorrect volume. Thus it is essential that blood products be only used when absolutely indicated. To achieve this we must be able to understand the effects of a low haemoglobin, platelet or clotting factor level and at what point would we expect to see adverse effects as a result of these low levels. Based on this we can then utilise a restricted approach to the transfusion of blood products, whilst administering alternative appropriate fluids and making use

of techniques to reduce blood loss.
After this presentation participants will be better able to:

- Understand when perioperative hypovolaemia from fluid deficit may occur; therefore learn to anticipate and treat this appropriately.
- Estimate the volume of blood loss that can be tolerated before the transfusion of red blood cells becomes necessary.
- Be aware of the surgical or trauma related circumstances where significant blood loss is likely; thus develop strategies to lessen both the extent and effect of this blood loss with the result of reducing the need for allogeneic blood transfusion.

ROOM: STRESA

15.30 - 17.00 (continued)

Blood transfusion symposium

State of the art: Thromboprophylaxis in paediatrics: Matthew Checketts
Venous Thromboembolic Disease (VTE) is rare in children. The incidence was estimated as 5.3/100,000 hospital admissions and 0.7/100,000 of the Canadian child population as a whole. The top Risk factors are Cancer (and chemotherapeutic drugs), Trauma & Major surgery and Congenital heart disease. Other risk factors include neonatal CVCs, obesity, oestrogen containing contraceptives (in adolescent females) and Thrombophilias. Two peaks of VTE incidence ages are in infants (over 80% associated with CVCs) and adolescents (male: female ratio 1:2). At least one risk factor exists in paediatric VTE in 80-90% of cases, compared with only 50% of adult VTE. The literature on paediatric VTE is sparse but a multidisciplinary group of clinicians have examined the evidence and made some recommendations on appropriate thromboprophylaxis for children at most risk. The recommendations have been sent out for peer review and a final report is in preparation. The conclusions will be discussed during the lecture.
Learning Outcomes: after this session I hope attendees will be able to

- Understand the epidemiology of VTE in the paediatric population
- Know the key risk factors and peak incidence age groups for VTE
- Discuss the UK APA clinician consensus guidelines on paediatric thromboprophylaxis

ROOM: ISOLA BELLA

15.30 - 17.00
Seminar

Safeguarding & child protection seminar: Kathy Wilkinson, Ingrid Russel

Public Health priorities for children vary across different countries and the eradication of poverty remains the most pressing issue in many societies. In many developed countries, the priority in cases of possible neglect or maltreatment is family support, and the balance is shifted towards less direct intervention to protect the child. Irrespective of this all professionals have a duty to promote the rights of the child .
In this workshop we will discuss some possible scenarios leading an anaesthetist to consider whether there is possible child maltreatment or neglect, arising in an anaesthetic or surgical context. We will discuss the conduct of the initial parent interview when concern is raised.
We will also place the candidates in the role of advisors, giving support if they were asked by a trainee or colleague as to what they should do in difficult situations. There is not always a right or wrong answer!
We will try and explore the solutions in different parts of Europe as they may differ.
After this session participants will be able to:

- Consider the conduct of an interview with parents about a Child Protection concern that has arisen
- Discuss a range of alternative scenarios and presentations of Safeguarding issues
- Consider the careful communication needed with other Health professionals and agencies

ROOM: ISOLA PESCATORI

15.30 - 17.00
Workshop

Managing Emergencies in Paediatric Anaesthesia (MEPA): Pauline Cullen, Mark Thomas, David deBeer

This workshop will consist of two simulated life-threatening paediatric anaesthetic emergencies. High fidelity mannequins will be used to recreate realistic clinical scenarios with all the usual available resuscitation drugs and equipment readily available. There will be a structured debrief to bring out and reinforce specific learning points. The ethos of the workshop is to nurture good practice in a realistic and engaging environment. The use of up to date guidelines will also be reinforced. Participants in these workshops have universally enjoyed them in the past and found the learning to be of very high value.

ROOM: ISOLA MADRE

15.30 - 17.00
Workshop

Airway workshop: Josef Holzki. Simonetta Baroncini, Lorenzo Mirabile

Fiberoptic techniques for intubation of the difficult airway are a standard approach, however, a successful intubation does not necessarily mean an atraumatic one. Since several years there are simple, affordable, rigid scopes on the market, allowing a quick diagnosis of airway problems (Hopkins rod lens) or a safe intubation in compromised airways (Bonfils rigid, curved intubation fiberscope which can reduce the problems with difficult airways considerably.
After this course participants

- will have received an introduction in the use of rigid scopes
- will have experienced the easy visualization of the laryngeal/tracheal mucosa with rigid instruments
- will better be aware of the effects of injury by traumatic intubation and incorrect use of tracheal tubes)

ROOM: SANTA CATERINA

15.30 - 17.00
Workshop

Ultrasound in regional anaesthesia: Steve Roberts, Martin Schmidt, Giorgio Ivani

The aim of this 90 minute workshop is to give the delegate as much hands on experience as possible.
There will be 4 groups of 5 delegates. On the day of the workshop we will group the delegates according to their level of ultrasound experience; in this way hopefully each group will learn at it's own pace.
Initially we will ensure the delegates understand the practicalities of using a portable ultrasound machine and simple needling techniques. Thereafter, we will rotate the group between the tutors so that different perspectives are experienced. During this rotation we will demonstrate and guide the delegates through a number of important paediatric nerve/fascial plane blocks. The scanning will be performed on adult models, if possible we will try to find child models.
The initial blocks we will work on are the truncal blocks (rectus sheath, TAP and ilioinguinal), we will follow this with supraclavicular plexus block and for the lower limb the femoral and popliteal nerve blocks. Where a group makes good progress we will try to modify the workshop to their needs; opening up the possibility to cover other blocks from the following selection - axillary, interscalene, proximal sciatic, ankle block nerves, lateral cutaneous nerve, epidural (difficult due to adult models).
Suggested reading: Anesthesiology. 2010 Feb;112(2):473-92.

ROOM: STRESA

11.00 - 12.30
Symposium ESPA Projects

Implementing guidelines: Karin Becke

Following the statutes of the ESPA, one the major aims of the society is to establish guidelines on the training, organisation and practice of paediatric anaesthesia and instigate working parties which will produce European Guidelines in the areas of simulation, training and patient safety in paediatric anaesthesia.
The first step of the subcommittee guidelines was the collection of national and local guidelines. In some countries there are already guidelines, recommendations or statements existing, mainly published by the anesthesiological societies or by national authorities, for example the Association of Paediatric Anaesthetists of Great Britain and Ireland (APAGBI) or the German Scientific Working Group on Paediatric Anaesthesia. A compendium of these guidelines will be presented in the lecture.
Simultaneously a new approach to make guidelines alive and applicable was discussed and initiated by the subcommittee: the so-called action cards. Action cards can help as a protocol to standardise critical situations in the OR, for example to give help with the dosing of rescue medication. Action cards for anaphylaxis and MH will be presented.
In the future, action cards for the top 10 of adverse events in pediatric anesthesia are to be worked out as well as ESPA Guidelines for services in paediatric anaesthesia.

Defining competencies for neonatal anaesthesia: Kerstin Sandström

In order to provide qualified and safe anaesthesia to neonates and young children in all European countries, ESPA has started a process how to define the necessary competencies. The aim is to present the result as an ESPA guideline. Neonatal anaesthesia is in the draft defined as “anaesthesia to children up to one year, with the exclusion of cardiac anaesthesia”.
The first part of the process will be to define what the individual anaesthetist needs to know and perform. The theoretical framework is defined in “Competencies for neonatal anaesthesia” and the practical training moments in “Skills for neonatal anaesthesia”.
The present status of this process will be presented and commented.

A competent anaesthetic service for children: Neil Morton

Several years ago FEAPA produced guidelines for training in paediatric anaesthesia and these have been very influential in Europe. In Scandinavia a new training program has evolved which has been highly successful. In the UK, competencies for paediatric anaesthesia have been defined in the 2010 revision of the training program and the UK Royal College of Anaesthetists has just revised its Guidance for the Provision Paediatric Anaesthesia Services. Also in the UK, some specialist services such as paediatric cardiac anaesthesia and paediatric neuroanaesthesia have been the subject of “safe and sustainable” reviews against defined standards. This talk aims to present a draft of a proposed new ESPA guideline that adapts and updates previous guidance on training and draws on recent advice on service provision and standards to suggest the essential and desirable components of a competent paediatric anaesthetic service for Europe in 2012.

ROOM : STRESA

12.30 - 13.00
State of the art

What every anaesthesiologist needs to know about muscle diseases?: Francis Veyckemans

Muscles diseases or myopathies are a complex group of rare diseases involving the muscular system. From the anaesthetic point of view, these diseases have variable functional and pharmacologic consequences.
The possible functional consequences are directly linked to the involvement of respiratory, myocardial and pharyngeal muscles. The possible pharmacological consequences are: a low respiratory reserve, an abnormal response to muscle relaxants, a risk of rhabdomyolysis or malignant hyperthermia when exposed to halogenated agents and or succinylcholine, the presence of hypotonia or contractures, scoliosis etc…

In addition, there is a major nosologic problem: the myopathies are still classified according to their clinical presentation (e.g., progressive muscular dystrophy) or on their histological characteristics (e.g., nemaline rod myopathy). However, progress in genetics and molecular biology has shown that the mutation of one gene can have different clinical presentations (phenotypes) and that a phenotype can be caused by different mutations: this makes the interpretation of the data from the myologic and anaesthetic literature even more complex to understand.
Following this lecture, the participant should be able:

- to suspect a muscle disease during the preoperative examination
- to suspect an unknown muscle disease in the presence of abnormal reaction to anaesthesia such as acute rhabdomyolysis or abnormally prolonged curarization
- to interpret an asymptomatic hyperCKemia
- to know which pathologies are at risk for acute rhabdomyolysis
- to know which pathologies are at risk for malignant hyperthermia and how to prepare an anaesthetic ventilator to take safely care of such patients
- to know recent advances in myotonic dystrophy and congenital myasthenia

ROOM : STRESA
14.00 - 15.30
ESPA ESPNIC symposium

Paediatric sepsis guidelines: Stephen Clement de Clety

Guidelines for the management of severe sepsis and septic shock have been published 10 years ago and recently updated. They are based either on scientific recommendations or on expert opinions. They probably do not have the same relevance.
Early recognition and fluid resuscitation are essential. Questions remain. The best type of solution always needs to be identified: synthetic colloids should most probably be abandoned; albumin 5% regains some interest while the choice between all the available crystalloids is still open. Fluid overload should absolutely be avoided and inotrope prescribed even through a peripheral intravenous line. Clinical and biological parameters help the physician in his/her evaluation but the task is not easy. The recommended threshold perfusion pressures are higher than expected. The hemodynamic profile of septic children varies according to the age, the past medical history, the type of infection and the elapsed time. The responsiveness to a fluid bolus requests different and repeated measures. The first-line inotrope or vasopressor cannot be dopamine alone and each medication should be tailored according to the evolution. Antibiotics must be given at the same time as fluid resuscitation; any delay is associated with a decreased survival. Some experts recommend hydrocortisone therapy but the indications and doses vary largely.
New guidelines will certainly be edited in the following years based on clinical studies we all should be involved in. They will not modify two certainties: the golden hour exists and a closed follow-up is mandatory!

How can the new Sepsis Survey Campaign Guidelines be adapted to children: Massimo Antonelli

This lecture will touch the different aspects of the management of severe sepsis and septic shock contained in the new surviving sepsis guidelines, that will be published in the 2013 January issues of Critical Care Medicine and Intensive Care Medicine

Paediatric sepsis trials- What we have learned from the past?: Jan Hazelzet

Pediatric sepsis still leads to high mortality and morbidity, although considerable improvement has been achieved. Until 5- 10 years ago the most abundant form was meningococcal disease. Many of the therapeutic trials have for this reason been directed against this condition. The pediatric sepsis RCT's have been setup to the handling of endotoxin or to the dramatic effects on coagulation leading to necrosis of the skin. None of these trials were positive despite the logical point of action in the pathophysiology of the agent studied (anti-endotoxin antibody, BPI, or activated protein C). Although all these studies showed a negative outcome, it is worthwhile to discuss the lessons learned from them. After this session participants will be better understand:

- The pathophysiology of sepsis, especially the handling of LPS by the innate immune system and the relation between coagulation and inflammation
- Why the pediatric sepsis RCT's possibly have failed

Genetic differences in paediatric sepsis: Simon Nadel

It is becoming increasingly recognized in children, that rather than being inherently susceptible to infection due to the relative immaturity of their immune system, some individuals are more susceptible than others to infection, whatever their age.
Among the small proportion of the population who develop invasive disease due to bacterial or viral pathogens, there is also great variability in outcome. For example some patients with meningococcal or pneumococcal bacteraemia present with self-limiting febrile illnesses, while others develop meningitis, shock, multi-organ failure and death.
There is now clear evidence that the variability in response to infection between individuals and within populations is not random, but is genetically determined, by elements within both the host and pathogen genome, which contribute to the outcome of the interaction.
This lecture will describe some of the background to this knowledge and some of the implications for children, in both presentation of disease and outcome, and attempt to suggest implications for prevention of disease and therapy.

ROOM : ISOLA BELLA
09.00 - 10.30
Workshop

Communication skills: Andreas Machotta

Communication is the basis for all kind of medical treatment. In addition, communication with parents and children is an opportunity to establish a shared relationship that will create a feeling of trust and confidence. Parents can experience psychological stress and even trauma when confronted with worrying or grave information about their child's health. In this workshop you will learn how parents use different coping strategies to handle these situations and what the main reasons for conflicts are. You will also learn how to decode a message to identify emotions and respond adequately helping parents and children to make conflicts productive. Specific communication skills are "Empathetic communication", and "Active listening" which means identifying and responding to one's emotions.

ROOM : ISOLA BELLA
11.00 - 12. 30
Seminar

Safe limits of blood pressure: Ton Schouten, Petra Lemmers

Although blood pressure measurement is an obligatory part of the minimal monitoring set in the OR and IC, we do not have evidence based and generally accepted definitions of hypotension. A limited review of the paediatric anaesthesia literature from the year 2000 to the present revealed 9 different definitions, of which four included neonates. Management of blood pressure is not only hampered by a lack of definition of hypotension, but also by the measurement method. There may be a substantial difference between non-invasive blood pressure values of arm, leg and invasive blood pressure. The main question is whether systemic blood pressure really reflects adequate organ perfusion, in particular cerebral. Beside inter-individual difference in autoregulation, a variety of factors may influence cerebral autoregulation, such as age, drugs, underlying disease and ventilator settings. Does non-invasive cerebral oximetry, widely used in paediatric cardiac surgery, have additional value in setting safe blood pressure limits for the individual patient? Knowing the limitations of the practice of blood pressure measurements, is it acceptable to apply deliberate intraoperative hypotension?
After this session participants will be better understand:

- the limitations of blood pressure measurements as monitor of safe perfusion state
- patient and treatment risk factors affecting cerebral autoregulation
- the rationale for deliberate intraoperative hypotension
- the value of cerebral oximetry as monitor of adequate cerebral perfusion

Safe limits of blood pressure seminar: Is there still a place for hypotensive anaesthesia in paediatrics? Bogumila Gebicka

The need for the hypotensive anaesthesia in paediatrics has decreased with the onset of the minimally invasive orthopaedic surgery (especially with modern techniques of spinal fusion). However, it has not become entirely obsolete, since a relatively "bloodless" operating field is still required in ORL procedures (i.e.middle ear or endoscopic sinus surgery), as well in children undergoing major reconstructive surgery.
Hypotensive anaesthesia can be accomplished with a number of techniques, including continuous infusion of vasodilators, -adrenergic blockade, deep inhalation anaesthesia, and recently, the use of high-dose opioid infusion (remifentanil), or magnesium. The choice of the appropriate technique depending on the surgical procedure ("bloodless" surgical field without potential for rapid blood loss versus anticipated significant blood loss) will be discussed, with the focus on the high-dose remifentanil administered with inhalational agents or propofol,.

ROOM : ISOLA BELLA

14.00 - 15.30
Workshop

Awake regional anaesthesia: Nicola Disma, Pablo Ingelmo, Graham Bell

Awake spinal anaesthesia in infants is associated with low rate of complications, such as intraoperative hypoxemia, bradycardia, and the hemodynamic stability is remarkable, even in neonates with congenital heart disease. Moreover, as postoperative apnoea is inversely proportional to gestational age at birth, the younger is the patient the grater are the benefits from regional anaesthesia. Finally, the impact of general anaesthetic agents on neurodevelopment is stimulating great interest as, recent studies in rat and primate models are suggesting that anesthetics may be toxic inducing neuronal cell death in the immature developing brain.
All the above reported findings are supported by a large retrospective study on spinal anaesthesia in infants., and published data on recommended doses of local anaesthetics for infant spinal anaesthesia as well as the use of adjuvants to prolong the duration of surgical anaesthesia.
We are developing an evidence base for both the benefits and risks of regional anesthesia, when used for specific patient groups and for specific surgical procedures. This workshop will be focussed on a pragmatic decision analysis on neonatal spinal anesthesia, with several practical take home messages.
In synthesis, after this workshop participants will be better able to:

- Understand the neuraxial anatomy of neonates
- The pharmacokinetic and pharmacodynamic of local anaesthetics in infants
- Pro and con of awake regional anesthesia.
- The hands on practice and the face to face opinion of three experts from different clinical back grounds will provide useful suggestions for routine daily practice.

Main References

1. Williams RK, Adams DC, Aladjem EV et al. The Safety and Efficacy of Spinal Anesthesia for Surgery in Infants: The Vermont Infant Spinal Registry. Anesth Analg. 2006;102:67–71.
2. Frawley G, Smith KR, Ingelmo P. Relative potencies of bupivacaine, levobupivacaine, and ropivacaine for neonatal spinal anaesthesia. Br J Anaesth. 2009;103(5):731-8.

ROOM: ISOLA BELLA

16.00 - 17.30
Workshop

Communication skills: Andreas Machotta

See Friday ROOM : ISOLA BELLA 09.00-10.30

Room : ISOLA PESCATORI

09.00 - 10.30
Seminar

Safeguarding & child protection seminar: Kathy Wilkinson, Ingrid Russel

See Thursday ROOM : ISOLA BELLA 15.30 - 17.00

Room : ISOLA PESCATORI

11.00 - 13.00
Italian language session

TIVA in neonates: Marina Sammartino

Painful procedures in neonatal practice has led to extend the use of the new analgo-sedatives to the early stages of life. A lack of PK/PD studies still persists so that analgosedation in neonates remains a decision based on drug administration titrated to be adapted to systemic assessment. As maturational changes are prominent in newborns every attempt to link neonatal data to those from children, is doomed to fail without considering covariates as descriptors of the allometric model. In infancy, instead of weight, post-mestrual age is the most relevant covariate to describe clearance maturation, even though it contributes to a wide inter-individual variability making neonates more prone to propofol accumulation. It has been shown that propofol clearance reaches 38% of the value at term neonate and 90% by 30 weeks after term, suggesting that also postnatal age may have an effect on propofol clearance. Besides, the lack of neonatal anaesthesia depth monitors avoided the equilibration half-life estimate (t1/2 keo) between the central and the effect compartment under 1 year. Specific neonatal EEG-algorithms incorporated in anaesthesia depth monitors (BIS), should reduce the possible adverse effects related to the highly variable propofol concentrations. The above reasons make propofol TCI unachievable in lower ages. Adult remifentanil pharmacokinetic parameters are used in TCI also for children. This approach seems safe beeng the elimination half-life small and the clearance faster in the newborn. Owing to these enhanced clearance rates, younger children require higher remifentanil infusion rates than older children to achieve equivalent blood concentrations.
After this presentation participants should better understand:

- differences in pharmacokinetics between neonates and older children.
- differences in drugs requirements
- to apply some of the informations to their daily practice

Brain monitoring: Marinella Astuto

Monitoring depth of anesthesia is at best tricky as we still know little about the human brain. The comparability, the reliability, and the limitations among the monitors will be explored. Although depth of anesthesia is a fascinating area of interest it is difficult to characterize because it involves a great variety of neural components (perception, attention, learning, memory, orientation, emotion, instinct, thought and volition) as well as their interactions. Since 1847, much has been published on this topic, describing the various methods used to assess the depth of anesthesi. But we still not have yet a comprehensive validated mechanism of general anesthesia this is the most important obstacle in the development of a "gold standard" for monitoring anesthesia depth.
Awareness is the knowledge that something exists, or better an understanding of a situation in the case of anesthesia is a condition of recall of an intra-operative event. Recall of an intra-operative event is uncommon, this has a reported incidence in children of 0.6%/2.7%
The currently available EEG devices examine and extract relevant information from an electrical signal, after they present it in a clinically useful manner.
The EEG derived monitor devices are currently the best reproducible system to evaluate the depth of anesthesia, for the prevention of intra-operative awareness and, of course, to find an acceptable level of anesthesia.
After this session participants will be able to

- To evaluate the depth of anesthesia with EEG monitor devices
- To know as prevent intraoperative awareness
- To find an acceptable level if anesthesia

Is decurarization always necessary in paediatric anaesthesia ?: Bruno Locatelli
Neuromuscolar blocking agents are used during anesthesia to facilitate tracheal intubation, mechanical ventilation and surgical procedure. Motor block reversal is usually assumed based on clinical data with time to last dose of Neuromuscolar Blocking Agents (NMBAs) being the most important factor. NMBAs pharmacokinetics and pharmacodynamics are a function of age.
Anyway individual response cannot be predicted and residual block is related to an increase in perioperative mortality and morbility (i.e. hypoxemia and airway obstruction, muscle weakness, longer PACU stay, delay in extubation and significant pulmonary complication). The Train of Four (TOF) is a reliable monitor of motor function and a TOF > 0,9 is considered the safety cut-off for recovery from NMBAs. Nonetheless, several surveys showed how anesthesiologist do not monitor routinely TOF and extubate patients with a TOF < 0,9 without any use of reversal agents and so exposing those patients to a preventable risk. Among reversal agents acetylcholinesterase inhibitors (e.g. neostigmina) are associated with muscarinics side effects (partially controlled by the use of large doses of anthicolinergic drugs). The newest reversal agent Sugammadex is an agent binding selectively relaxant drugs designed to encapsulate the steroidal NMBAs rocuronium and vecuronium : thereby preventing their binding to nicotil receptors at the neuromuscolar junction. Sugammadex is a particularly appealing molecule due to its ability to reverse even very deep block in the pediatric population.
Take home message:
- Patients that undergone neuromuscular block should be monitored by TOF and decurarized, if necessary;
- TOF unmonitored patients should be always decurarized.

NAVA ventilation in neonates: Federica Ferrero
NAVA ventilation in neonates
In neonatal population accumulating evidence suggests that patient-ventilator dyssynchrony may be a predictor of poor respiratory outcome. A common reason for dyssynchrony is the lack of sensitivity of triggering systems that rely only on flow or airway pressure signals to identify the start of inspiratory effort, so it can happen that sensors could be either over or under sensitive.
Neurally Adjusted Ventilatory Assist (NAVA) can detect the activity of the respiratory neural system, with the assumption that the electrical activity of the diaphragm (EAdi) accurately represents the output of the respiratory centers. It can deliver pressure in proportion to the electrical activity of the diaphragm throughout inspiration and hence responds to the patient's respiratory drive. A proportionality factor (NAVA level) determines the amount of ventilatory assistance, that means how much pressure delivered for a given amplitude.
Crucial in NAVA is the identification of the start of neural exhalation: for neural cycling off, ventilatory assist has been set to terminate when EAdi has decreased to 70% of its highest peak. Allowance for individual setting of termination could improve the synchrony even more, more accurate triggering of assist at inspiration and more precise termination of assist during exhalation.
This measurements allow to achieve good timing between the beginning/end of the patient's effort and the start/end of the ventilator-delivered breath and to deliver assist in proportion to the patient's respiratory drive.
After this presentations participants should have a better understanding of
- Basic concepts of NAVA
- Its application in newborns
- Evaluation with other ventilatory techniques and potential advantages

Hypothermia in cardiac arrest and trauma: Sergio Picardo
Therapeutic hypothermia is an established treatment for neonates with hypoxic ischaemic encephalopathy after birth and adults after ventricular fibrillation cardiac arrest. There is little published research on the use of therapeutic hypothermia after paediatric cardiac arrest and wide variation in its use, in the duration and depth of therapeutic hypothermia used. Therapeutic hypothermia reduces cerebral metabolism and attenuates multiple cellular injury cascades. In recent years there has been a significant increase in our understanding of the cascade of destructive processes that unfold in the injured brain in the minutes to hours after an episode of ischemia or trauma. The most recent guidelines from the American Heart Association and the European Resuscitation Council recommend the use of hypothermia for selected patients who remain comatose following a witnessed cardiac arrest . Under certain conditions, hypothermia is also used therapeutically in the treatment of severe traumatic brain injury, stroke, hepatic failure, spinal cord injury, and numerous others. The evidence for these and other potential indications will be discussed. After this presentations participants should have a better understanding of
- the physiologic changes and potential side effects associated with hypothermia
- currently available methods for inducing hypothermia

ROOM: ISOLA PESCATORI
14.00 - 15.30
Workshop
Managing Emergencies in Paediatric Anaesthesia (MEPA): Pauline Cullen, Mark Thomas, David deBeer
See Thursday ROOM : ISOLA PESCATORI 15.30 - 17.00

ROOM : ISOLA PESCATORI
16.00 - 17.30
Symposium
Why do we need collaborative trials? The GAS Study: Andrew Davidson, The SLEEPS study: Andy Wolf, Pain at home initiative: Graham Bell
To answer some of the big questions satisfactorily we need large patient groups to ensure the study has adequate power and is more likely to produce meaningful, generalisable results. For a single institution to attempt this in the current ethical, regulatory and financial environment would not be feasible and so multi centre and multi national collaborations are needed. In this session three trials are described to illustrate the benefits and problems of collaborative trials in anaesthesia, critical care and pain management.

ROOM : ISOLA MADRE
09.00 - 10.30
Workshop
Airway workshop: Josef Holzki. Simonetta Baroncini, Lorenzo Mirabile
See ROOM : ISOLA MADRE Thursday 15.30 - 17.00

ROOM: ISOLA MADRE
11.00 - 12.00
Seminar
Consent & risk seminar: Kathy Wilkinson, Steve Robberts
We will discuss good practice points in relation to risk discussions and consent in children and young people undergoing general and regional anaesthesia. The session will consist of a short presentation, followed by case discussions.
At the end of the seminar candidates will
- have considered the potential problems surrounding risk discussion and consent in children and young people in relation to competence
- be more confident to provide appropriate written and verbal information to facilitate their practice

ROOM : ISOLA MADRE
12.00 - 13.00
Seminar
Sedation seminar: Mike Sury, Andrea Messeri, Fabio Borrometi
Three controversial topics will be presented and discussed
1. Sedation methods for endoscopy
2. Nitrous Oxide sedation
3. monitoring for sedation

ROOM : ISOLA MADRE
14.00 - 15.30
Seminar
Ventilatory support
Non-invasive ventilation in children: indications and contraindications: Edoardo Calderini
In adult patients Noninvasive Ventilation (NIV) has become first line therapy for many respiratory pathologies such as COPD, cardiogenic pulmonary oedema and respiratory distress in immunocompromised patients thanks to its effectiveness and safety. Although several studies demonstrate the feasibility and the increasing clinical use of NIV in children, the lack of clear and univocal international guidelines is the main concern for the limited use of NIV use in the paediatric population. As a matter of fact endotracheal intubation and invasive mechanical ventilation still represent the standard therapy in the approach of respiratory failure. This lecture will examine the role of non invasive ventilation in the treatment of acute respiratory failure in pediatrics. In particular, the session will focus on:
- pathophysiology of acute respiratory insufficiency
- indications and contraindications of NIV
- technical and practical clinical issues
- predictive factors of NIV failure

How to ventilate children with chronic respiratory failure: Fabrizio Racca
The aim of this lecture will be to analyze recent advances in long term ventilation (LTV) in pediatric patients. Over the past 20 years, LTV in the pediatric population, delivered via tracheostomy or non invasive interfaces, has rapidly expanded. In fact, LTV for children with chronic respiratory failure is an established supportive therapy that reduces morbidity and mortality, in particular in patients with neuromuscular disorders (NMD) and chest wall disorders (CWD). Furthermore it has been proved that the quality of life improves after the start of LTV independent of the underlying disease. In addition, advances in neonatal and pediatric intensive care have improved the survival rate of critically ill children and, therefore, incremented the number of those requiring medium or long term ventilatory support. Finally, manufacturing development of the mechanical ventilation technology (i.e., mechanical ventilators and noninvasive interfaces) have made it easier the application of the LTV even in children. It is now accepted practice that home environment is preferable to the hospital setting. In fact, with proper patient selection, LTV at home is safe and offers the best option for the child's psychosocial development, social integration and reintegration with the family and quality of life. Moreover, the direct cost of home care is usually lower than that of hospital care.
After this session participants will be able to:
- know which pathologies are at risk for chronic respiratory failure requiring LTV
- assess respiratory function in children
- choose the right indications for LTV in the paediatric setting
- optimize ventilator setting during LTV
- choose the optimal interface
- know which are the criteria for home discharge

Optimising NIV in paediatric patients: Giorgio Conti
Extensive research about non-invasive ventilation (NIV) has been performed in adults and NIV is now considered as first-line intervention for COPD exacerbation, cardiogenic pulmonary oedema and immunosuppressed patients with hematologic malignancies or solid-organ transplantation complicated by hypoxemic ARF. Despite the paucity of data from large prospective clinical trials in the pediatric population does not permit to automatically assume the above described benefits also for children, several case series and at least two large studies published in the last decade suggest that NIV can have great potential as an alternative to standard treatment also in infants and children with acute respiratory distress. In the pediatric population NIV refers both to the administration of noninvasive CPAP or noninvasive positive pressure ventilation (NPPV).
However specific attention is required to some important technical aspects as the choice of the optimal interface, the optimization of ventilator mode and the correct use of specific settings (as inspiratory pressurization rate, expiratory trigger setting and others).
The aim of this lecture will be: 1) to analyze the optimal indications for NIV in pediatric patients, 2) to point out the most common "tricks" for obtaining an optimal machine setting during NIV in children.
After this session participants will be able to:
- ghoose the right indications for NIV in the pediatric setting
- optimize ventilator setting during NIV
- choose the optimal NIV interface
- identify the most common types of ventilator asincronies during NIV

ROOM : ISOLA MADRE
16.00 - 17.30
Seminar
Ventilatory support
See Friday ROOM: ISOLA MADRE 14.00-15.30

Room : SANTA CATERINA
09.00 - 10.30
Workshop
Ultrasound in regional anaesthesia: Steve Roberts, Martin Schmidt, Giorgio Ivani
See room: Santa Caterina 15.30-17.00 Thursday

Room : SANTA CATERINA
11.00 - 12.30
Workshop
Ultrasound in emergency/critical care: Enrico Storti, Luca Neri, Tortsen Lauritsen
The concept of 'Critical Ultrasound' has recently evolved with the availability of high quality mobile ultrasound devices, in combination with an increasing number of clinicians who have developed point-of-care ultrasound skills, to help manage patients in 'critical' situations. Clinical scenarios turn into 'critical' ones when there is a dangerous performance gap between the patient status and the resources available for decision making and problem solving (Crisis Resource Management). This typically occurs in the acutely ill patient (Emergency US) or intensive (Intensive/ Critical Care US), and/or where human or technical resources are particularly limited (Screening US, Triage US, Remote US, Primary US). Point-of-care image acquisition and interpretation, integrated with life support protocols (BLS, ALS/ACLS, ATLS, PHTLS/PTC, PALS, ect.), which follow the 'ABCDE' and 'Head-to-toes' -type approaches, allow for rapid and effective decision making, and enhance triage, diagnosis, therapy, monitoring, and patient follow up.
The workshop will give basic cutting of the edge updates in pediatric Critical Care Ultrasound (US) including basic focused ECHO, Lung US, Abdomen US, central line & vascular access guided by US. It will also explain

how to incorporate US to enhance the pediatric critical management of hypotension, trauma, shock, respiratory failure and during certain steps in CPR.

Room : SANTA CATERINA
14.00 - 15.30
Workshop
Ultrasound in vascular access: Ehrenfied Schindler, Christian Breschan, Thierry Pirotte
Ultrasound(US)-guidance techniques have become the gold standard for the internal jugular vein cannulation in children. Other well described US-guided access routes in children are the infraclavicular cannulation of the subclavian vein and the supraclavicular cannulation of the brachiocephalic vein. For the two latter approaches the in-plane technique e.g. insertion of the needle along the long axis of the US probe while aiming for the longitudinally viewed vein has been advocated whereas for the internal jugular vein the out-of-plane technique e.g. insertion of the needle along the short axis of the US probe while aiming for the cross-sectionally viewed vein has usually been applied. US-guidance has also been described in children for the cannulation of the femoral vein as well as artery. In this workshop the 3 most popular US-guided central venous access routes i.e. internal jugular-, infraclavicular and supraclavicular subclavian venous approach will be presented shortly via power point presentations. After that you will be able to practice the sonoanatomy of vessels by the use of US on children and teenagers on an interactive basis. In addition the US-guided puncture of vessels on Blue Phantoms (jelly devices) can also be practiced.
After this session participants will be better able to
- understand the sonoanatomy of vessels
- image on ultrasound the most popular vascular access routes in children
- handle the hand-eye coordination of needle guidance under ultrasonographic view.

Room: SANTA CATERINA
16.00 - 17.30
Workshop
Ultrasound in emergency/critical care: Enrico Storti, Luca Neri, Tortsen Lauritsen
See Room : SANTA CATERINA 11.00-12.30 Friday

ROOM: STRESA
09.00 - 10.30
ESPA-EACTA symposium

Paediatric heart failure - diagnosis & pharmacological support: Marco Ranucci
Acute Heart Failure (AHF) in pediatric patients has peculiar aspects and presents specific problems in the diagnosis and pharmacological management. From the diagnostic point of view, monitoring of the patient has a paramount role. In newborns and small infants, some of the diagnostic tools available in the adults (pulmonary artery catheters) are not useful. Conversely, the echocardiographic assessment of pediatric AHF plays a very important role. Transthoracic echocardiography is always feasible, and even transesophageal echocardiography may be used in patients weighing > 5 kgs in the most difficult cases. AHF is usually accompanied by signs and symptoms of low cardiac output. Indirect signs include cold, pallid and mottled skin; high central-peripheral temperature gradient; faint or absent peripheral pulses; poor urine output; hypotension; decreased ScVO2; increased lactate concentration; more specific signs of AHF-induced poor cardiac output are dilated external jugular veins; enlarged liver; swollen interbone skull breach; high filling pressures.
Within this pattern, the echo examination may clarify the nature of the AHF (extrinsic compression; left ventricular outflow tract obstruction; systolic vs diastolic dysfunction; left or right or biventricular dysfunction; pulmonary hypertension). The pharmacological treatment of pediatric AHF is based on an accurate diagnosis. The use of the different inotropic and vasoactive drugs (dopamine, dobutamine, epinephrine, nor-epinephrine, milrinone, levosimendan…) should be carefully based on the underlying cardiac problem; specific measures (iNO) should be applied to treat pre-capillary pulmonary hypertension.
After this session, the participants will have an understanding of
- Monitoring tools in pediatric heart failure
- Diagnostic pathway in pediatric heart failure
- Pharmacological support in the different patterns of pediatric heart failure

Lung dyshomogeneity and consequences for mechanical ventilation: Luciano Gattinoni
ARDS does not homogeneously affect the lung parenchyma and the nature of infiltrates visible at the chest X-ray may derive from atelectasis, interstitial or intra-acinar edema or consolidation. The potentially recruitable lung varies widely in the ARDS population, ranging from 5 to 70% of the total lung weight and it is strictly associated with the severity of injury: greater is the amount of gasless tissue at 5 cmH2O PEEP, greater is the amount of gasless tissue regaining aeration at 45 cmH2O airway pressure. We hypothesized that the regions that experience the major amount of stress and strain during mechanical ventilation are the region near to the always closed ones. In fact we recently found in an animal model that the damage occurs when the strain and stress are in the region of total lung capacity. Nevertheless, in mechanically ventilated patients, VILI may develop at stress and strain far lower than the threshold observed in experimental animals. A possible explanation is that the damaged lung is more “fragile” and injury develops at lower stress and strain thresholds. Moreover in a dishomogenous lung the applied force, which should be evenly distributed in a normal lung, is locally concentrated leading to localized increase of stress. Mead et al, in the seventies, simulated the effects of a lung volume decrease from 10 to 1 in a single lung region. The pressure applied, in this case, was computed as the product of the applied pressure (as an example 30 cmH2O transpulmonary pressure) to the ratio Area1/Area0 (mathematically equivalent to (Volume1/Volume0)2/3): i.e. 30*4.64 = 139.25 cmH2O. Accordingly the location of dishomogeneity throughout the lung may act as a “pressure multiplier” and a pressure below the threshold observed in “healthy lung”, if multiplied sufficiently, may locally reach a level recognized as surely injurious.
After this session the participants should have a better understanding of
- the concept and the mechanisms of stress and strain, the real triggers of VILI, applied to the lung during mechanical ventilation

Who is the best candidate for a new pediatric cardiac anaesthesia program?
A paediatric anaesthesiologist attending a specific training in cardiac anaesthesia: Greg Hammer
Pediatric cardiac anesthesia is a highly specialized area of practice and relies upon a distinct base of knowledge

in both pediatric and cardiac anesthesia. In acknowledgement of the complexity of pediatric cardiac anesthesia practice, the current trend in the United States is toward prerequisite training in a 12-month fellowship in pediatric anesthesia and an additional 12-month fellowship in pediatric cardiac anesthesia following completion of residency in anesthesiology. Training in pediatric anesthesia includes an introduction to the full range of congenital anomalies and syndromes that are associated with congenital heart disease as well as exposure to the myriad of congenital heart defects per se. Fellowship in pediatric anesthesia also focuses on the care of premature newborns that present a unique array of challenges. Additional fellowship training in pediatric cardiac anesthesia expands exposure to congenital heart surgery and the trainee's understanding of circulatory monitoring, physiology and management of the coagulation system and cardiopulmonary bypass, and cardiac surgical procedures. This 24-month sequence is designed to equip the pediatric cardiac anesthetist with the complete range of skills necessary to provide optimal care for these most challenging patients.
Following completion of the symposium, the attendee will be

- familiar with current trends in training in pediatric cardiac anesthesia in the United States and elsewhere;
- able to identify essential aspects of pediatric cardiac anesthesia for which a background in pediatric anesthesia is desirable.

An adult cardiac anaesthesiologist attending a specific training in paediatric anaesthesia: Matthias Mueller

The detailed understanding of the pathophysiology of the congenital heart defect (CHD) and its interaction with anesthesia and surgery/intervention is, without doubt, the key factor for providing successful anesthesia to patients with congenital heart disease.
From my personal point of view a previously completed adult cardiothoracic fellowship makes the first steps in anesthesia for congenital heart surgery easier because this candidate has, at least, basic experience in:

- Providing anesthesia to hemodynamically compromised patients
- Placing of invasive monitors and interpreting of intravascular pressures and waveforms.
- Intraoperative transesophageal echocardiography
- Managing of patients on cardiopulmonary bypass
- Managing of hemodynamic instability and bleeding complications

The „ideal" candidate should, furthermore, improve his knowledge in general pediatric anesthesia during a period of clinical work, in a non-cardiac pediatric surgery unit before entering the pediatric cardiac anesthesia program. However, we should keep in mind that, as a consequence of the increasing long-term survival, the patient group growing most rapidly at most centers is the adolescent and adult with CHD. This makes experience in adult cardiothoracic anesthesia of particular importance.
After this session the participants should have a better understanding of

- Duties and responsibilities of Anesthesia for CHD
- Different pathways to enter a special training program for pediatric cardiac anesthesia

ROOM : STRESA

11.00 - 12.00
Anaesthesia & the developing brain symposium

Mechanisms of neurotoxicity of anaesthetic agents: Andrew Davidson

It is well known that in the neonatal animal model exposure to several of the general anaesthetic agents causes neuronal apoptosis. The mechanism for this is still largely unknown, though the toxicity is probably related to developmental changes in receptor function. We are born with an excess of neurons. Many are normally culled via apoptosis. This culling may be activity dependent; and thus it may be that the neuronal quiescence during anaesthesia triggers accelerated apoptosis. There is increasing evidence that this may indeed be the case and involves BDNF pathways. Another theory is that inactivity leads to up regulation of NMDA receptors which in turn results in excitotoxic injury once the NMDA antagonism is removed.
Recently anaesthetic exposure has been shown to cause many other structural changes apart from apoptosis. These changes occur in a broader age range and at shorter periods of exposure. It is not known if these other changes are due to the same mechanisms as apoptosis.
Determining the mechanisms for neurotoxicity is vitally important as an understanding of mechanisms will underpin the translation to clinical situations. An understanding of mechanisms will inform us which children are most at risk and with what exposures. Without this information designing and interpreting clinical studies is very difficult.
At the end of this talk participants will understand:

- Nature of the effects seen
- Possible mechanisms for neurotoxicity
- Importance of future research into mechanisms

Protecting against neurotoxicity: Nicola Disma

Despite the incomplete understanding of the exact molecular mechanism of action of the anaesthetic agents and sedative drugs, millions of infants and children every years undergo general anesthesia for painful procedures and surgery. Animal studies are showing increasing evidence of deleterious effect on the developing central nervous system leading apoptosis and delay in achieving the cognitive stages. Otherwise, anesthesia is still the only safe treatment against the deleterious effects of pain, stress and inflammatory response induced by surgery, which are trigger for damaging the delicate equilibrium of the young brain. Finally, sedative drugs and general anaesthetics can also be protective in certain circumstances such as hypoxia or trauma.
The exact mechanism of action of the anaesthetic toxicity and protection is still unclear. Most of the current research on neuroprotection is concentrated on alpha2-adrenergic agonists, lithium, xenon and hypothermia. They increase the degree of neuronal inhibition and seem to mitigate the anesthesia induced cell death. Suppression of excitatory neurotransmission, and potentiation of inhibitory activity, which may contribute to the reduction of excitotoxic injury are other studied mechanisms for protection. Finally, activation of intracellular signalling cascades that lead to altered expression of protective genes may also be involved.
This lecture is aimed to review the newest suggested neuroprotective strategies that would mitigate the potential for harm from exposure to anesthetics or sedatives during early periods of development and synaptogenesis.

Main References

1. Ward CG, Loepke AW. Anesthetics and sedatives: Toxic or protective for the developing brain? Pharmacol Res. 2012 Mar;65(3):271-4.
2. Sanders RD, Ma D, Brooks P, Maze M. Balancing paediatric anaesthesia: preclinical insights into analgesia, hypnosis, neuroprotection, and neurotoxicity. Br J Anaesth. 2008 Nov;101(5):597-609.

What should we say to parents?: Tom Hansen

Although the animal data on this topic are indeed impressive, overwhelming and disturbing caution should be undertaken when translating these data into a human clinical context. These animal studies have been subjected to major criticism. If it exists the clinical manifestations of anaesthesia-induced neurotoxicity must be vague and subtle; otherwise it would have been suspected years ago. The animal studies were never driven by any clear or well-defined associations between general anaesthesia and subsequent specific neurocognitive deficits. It is also unknown when and how the supposed neurotoxicity will be revealed clinically in humans.
So far several human epidemiological cohort studies have been published on this topic. Some of these studies have indicated an association between anaesthesia/surgery and subsequent impaired neurocognitive function - particularly in relation to repeated exposures/procedures. Other similar studies have been unable to indicate such an association. These studies, however, suffer from limitations inherent in their design, particularly regarding the problems with unknown confounders. Children do not undergo anaesthesia unless there is a reason for it. Thus, anaesthesia is associated with surgery and diagnostic procedures which again are associated with pathology.
At this point, there is no reason for changing current clinical anaesthetic practice. It is ethically unacceptable to subject neonates and infants to surgery and invasive procedures without the benefits of anaesthesia and analgesia.
At the end of this talk participants will understand:

- The difficulties in translating animal data to humans
- The limitations (and strengths) of epidemiological cohort studies in this context
- Anaesthesia given to an otherwise healthy child undergoing a routine procedure does not appear to be neurotoxic

ROOM: STRESA
12.00 - 13.00
ESPA Guest Lecture
How can epidemiology help answer concerns about neurotoxicity? Kaare Christensen
The skepticism in clinical medicine towards observational epidemiological studies is – often with good reason - deep and sometimes summarized as "It's better to be healthy and rich than sick and poor" research. Randomized controlled trials (RCTs) are, on the other hand, again with good reason considered the gold standard for providing evidence on the efficacy in medical research. But what do we do when we don't have at hand an RTC on an important question such as, for example, "What are the long term consequences of anesthesia in infants"? Do we claim that we have no idea, or do we try to learn from available observational data on hundreds of thousands of operated children while we are waiting for the RTCs?
This lecture will cover the strength and weaknesses of both RTCs and observational studies. It will also point out that in some cases the observational studies can complement the RCTs when the biases and their potential effects are recognized both in the analyses and in the interpretation of the results. An example will be given on how a recent observational study gave insight into the long term effect of early life anesthesia on cognitive functioning.
After this session participants will be better able to:
- Understand the strengths and weaknesses of observational neurotoxicity studies
- Apply this knowledge in future evaluation of new scientific findings

Room: ISOLA BELLA
09.00 - 10.30
Workshop
Awake regional anaesthesia: Nicola Disma, Pablo Ingelmo, Graham Bell
See Room: ISOLA BELLA Thursday 14.00-15.30

Room : ISOLA BELLA
11.00 - 12.00
Seminar
Sedation seminar: Mike Sury, Andrea Messeri, Fabio Borrometi
See ROOM : ISOLA MADRE Friday 12.00 - 13.00

Room: ISOLA PESCATORI
09.00 - 10.30
Seminar
Fluid management seminar: Becke, Andrea Moscatelli, Christoph Eich
Children are at an increased risk to develop hyponatremia during the perioperative period particularly if they suffer from severe comorbidity and suboptimal intravenous fluid strategies are used. That may lead to serious complications and even mortality because of hyponatraemia, hyperglycaemia or medical errors.
The "fluid management seminar" is a highly interactive session that focuses on children at increased risk for electrolyte dysbalances, e.g. children with pyloric stenosis. Experienced pediatric anesthetists will present their way of managing a case and discuss their strategies with the auditorium. Furthermore, the seminar will elaborate strategies and algorithms for prevention as well as treatment of hyponatremia and hyperglycemia.
After this seminar participants will be able to
- Evaluate the preoperative condition of children scheduled for elective and emergency surgery
- Consider the optimal fluid management in neonates, infants and children for surgical procedures
- Treat perioperative adverse events induced by hyponatremia and/or hypergylcemia

Ref: European consensus statement for intraoperative fluid therapy in children. Eur J Anaesthesiol 2011; 28: 000-000, published Ahead-of-Print, 06.06.2011)

Room: ISOLA PESCATORI
11.00 - 12.00
Case based discussions
Chairperson:
Walid Habre

Delayed awakening after total intravenous anaesthesia (TIVA)
central anticholinergic syndrome. (CAS)
Jakobea Benz-Wörner

Life-Threatening Hyperkalaemia In Preterm Newborn:
Two Cases
Elisabetta Lampugnani

Propofol Related Infusion Syndrome (PRIS):
prodromal marks in propofol high dose infusion in pediatric anaesthesia
Massimo Mastrangeli

Safety of anaesthesia during paediatric surgical mission in a developing country:
a retrospective study over 2 consecutive years
Mirko Dolci

ROOM : ISOLA MADRE
09.00 - 10.30
Pediatric Anesthesia Journal Symposium
How to review a paper: Tom Hansen. Editor's choice of the best papers 2011: Greg Hammer Q&A with the editor
As an ESPA member you are entitled to a reduction in your subscription to Pediatric Anesthesia. The journal is keen to support educational sessions for ESPA. An important part of the process of selecting papers for publication is peer review, but have you ever been taught how to review a paper for a journal? This session will help by showing you what you need to do, but also what not to do!
We will summarise the best papers from the last year's issues of Pediatric Anesthesia and there will be plenty of time for discussion with the journal's editorial team.

ROOM: ISOLA MADRE
11.00 - 12.00
Case based discussions
Chairperson:
Martin Jöhr

Sedation during magnetic resonance imagining in children
Antigona Hasani

Combination of ketamine and propofol for procedural sedation and analgesia during upper gastrointestinal endoscopy in children
Ivana Budic

Epidural block for treatment of femoral artery occlusion after its cannulation in a newborn patient
Bárbara Ribeiro

Is epidural analgesia in children with thoracoscopy for empyema dangerous? Report of six cases
Lorena Pasini

ROOM: SANTA CATERINA
09.00 - 10.30
Seminar
Analgesics in Children: Andrea Messeri
This presentation describes some of the important properties, dosing regimens, interactions and adverse effects of analgesics for acute and chronic pain pain in children.
Opioids, NSAIDs, and paracetamol form the pharmacological basis for the majority of analgesic regimens. It includes recommendations for pain assessment, general principles of pain management and advice on the use of pharmacological pain management strategies for some specific medical and surgical pathologies

ROOM: SANTA CATERINA
10.30 - 12.00
Workshop
Ultrasound in vascular access: Ehrenfied Schindler, Christian Breschan, Thierry Pirotte
See Room : SANTA CATERINA Friday14.00-15.30

FREE PAPER PRIZE

S.A.R.N.e P.I.
Società di Anestesia e Rianimazione Neonatale e Pediatrica Italiana

ESPA
European Society for Paediatric Anaesthesiology

0009

Comparison of ultrasound-guided transversus abdominis plane block vs caudal block for postoperative analgesia after minor abdominal surgery in children: a randomized controlled trial.

Federico Fiocca[1], Fabio Micheli[2], Francesca Fianelli[1], Francesca Pinzoni[1], Michela Cuomo[1], Barbara Rosina[1], Maria Silvana Molinaro[1], *[1]Pediatric Anesthesia and Intensive Care Unit-AO Spedali Civili, Brescia, Italy,[2]Faculty of Medicine-University of Brescia, Brescia, Italy*

0011

Mucosa atomization device vs drop by drop administration of intranasal midazolam for premedication in preschool age patients

Sindija Grinberga[1], Arnis Vilks[2], Biruta Mamaja[2,3], *[1]Children's Clinical University Hospital, Riga, Latvia,[2]Riga Eastern Clinical University Hospital Gailezers, Riga, Latvia,[3]Riga Stradins University, Department of Anaesthesiology and Reanimatology, Riga, Latvia*

0013

Safety and quality of care in paediatric anaesthesia: Pain Monitor

Giuliana Arena[1], Massimiliano Sardo[1], Pietro Valastro[1], Filippo Palermo[2], Marinella Astuto[1], *[1]Departement Anaesthesia and Intensive Care, Paediatric section, University of Catania, Catania, Italy, Italy,[2]Department of Clinical and Experimental Biomedicine, University of Catania, Catania, Italy, Italy*

0035

The effect of intraoperative administration of dexamethasone for PONV-prophylaxis on perioperative blood glucose level in obese and normal weight children

Richard Gnatzy[1], Gunther Hempel[1], Annika Hebestreit[2], Udo X. Kaisers[1], Claudia Philippi-Höhne[1], *[1]Department of Anaesthesiology and Intensive Care Medicine, University of Leipzig, Leipzig, Germany,[2]Department of Paediatric Surgery, University of Leipzig, Leipzig, Germany*

0037

Use of preoperative Overnight Oximetry data in children with Obstructive Sleep Apnoea undergoing adenotonsillectomy with a low dose opiate and multi-modal perioperative analgesic regime is associated with a low incidence of postoperative respiratory complications; combined results of a three stage audit process.

Henrik Hack[1], *[1]Royal Manhster Children's Hospital, Manchester, UK*

0064

Fenoldopam mesilate reduces lactate peak level during cardiopulmonary by pass for paediatric cardiac surgery

Laura Ressia[1], Paola Grasso[1], Franco Lerzo[1], Anna Maria Carleo[1], Lara Petrucci[1], *[1]Gaslini Children's Hospital, Genoa, Italy*

0073

Treatment of anxiety at induction of anaesthesia in children: a randomized controlled trial of non-pharmacological approach versus midazolam or placebo.

Raffaella Sagredini[1], Cristina Mascheroni[1], Veronica Diotto[1], Elisabetta Tranquillini[1], Federica Paracchini[1], Parmenio Mercuri[1], *[1]AO Ospedale di Circolo e Fondazione Macchi-Ospedale Materno Infantile F.Del Ponte, Varese, Italy*

0078

The relative position of femoral artery and vein in healthy children under general anaesthesia – An ultrasound guided observational study

Nandlal Bhatia[1], Jai Sivaprakasam[1], Mark Allford[1], Velupandian Guruswamy[1], *[1]Leeds Teaching Hospitals, Leeds, UK*

0079

Comparison between Sterofundin (and glucose 1%) and Normal Saline (with glucose 1%) for intraoperative fluid management in children aged less than 36 months undergoing major surgery. Multisite, Randomized, Open Trial.

Nicola Disma[1], Leila Mameli[1], Giovanni Montobbio[1], Silvia De Benedetto[1], Bruno G Locatelli[2], Valter Sonzogni[2], Alberto Benigni[2], Viviana Prussiani[2], *[1]Dept Anesthesia, IRCCS Gaslini Children's Hospital, Genoa, Italy,[2]Dept Anesthesia, Riuniti Hospital, Bergamo, Italy*

0009

Comparison of ultrasound-guided transversus abdominis plane block vs caudal block for postoperative analgesia after minor abdominal surgery in children: a randomized controlled trial.

Federico Fiocca[1], Fabio Micheli[2], Francesca Fianelli[1], Francesca Pinzoni[1], Michela Cuomo[1], Barbara Rosina[1], Maria Silvana Molinaro[1], *[1]Pediatric Anesthesia and Intensive Care Unit-AO Spedali Civili, Brescia, Italy,[2]Faculty of Medicine-University of Brescia, Brescia, Italy*

Introduction

Transversus abdominis plane (TAP) block was first reported in 2001 as a new approach for postoperative analgesia following abdominal surgery [1]. Despite numerous studies reported effective postoperative analgesia in adult population, only a few studies has been realized in paediatrics [2]. With the utilization of ultrasound (US) guidance for regional anaesthesia, this block has been reported as effective and safe in providing postoperative analgesia following abdominal surgery in children [3]. With this study we compared TAP block to conventional caudal block for postoperative analgesia after minor abdominal surgery in children.

Methods

After approval from the hospital ethic committee and written informed consent, we enrolled seventy paediatric patients undergoing elective day-case minor abdominal surgery. Inclusion criteria were age between one and eight years and ASA 1-2 status. Patients with history of adverse reaction to local anaesthetics, coagulation or neurological disorders were excluded. Patients were randomly assigned to receive, after induction of general anaesthesia, preincisional US-guided TAP block (umbilical plane at anterior axillary line) with 0.2 ml x kg-1 ropivacaine 0.2% or preincisional caudal block with 1 ml x kg-1 ropivacaine 0.2%. Supplemental intraoperative analgesia consisted of fentanyl 3 µg x kg-1 at induction, and as-requested remifentanil. Postoperative analgesic therapy consisted of iv paracetamol 10 mg x kg-1 when age-appropriate pain score, assessed in the recovery room and in the day-surgery unit, was higher than 4. Patients were also assessed 24 h after surgery by phone interview for analgesic consumption and parental satisfaction.

Results

Fifty-seven patients were included in the study: twenty-nine received TAP block and twenty-eight caudal block. Demographic variables were similar in the two groups. Fifteen patient receiving TAP block and ten receiving caudal block required iv paracetamol in recovery room or day-surgery unit. Mean time from block execution to first paracetamol administration was 370 minutes in TAP group and 457 minutes in caudal group. One patient in TAP group, who had surgery for bilateral inguinal hernia repair, required a second dose of paracetamol in day-surgery unit and a supplemental dose of oral paracetamol at home. There were no complications in both groups.

Discussion

Data shows minor analgesia duration and a higher request of paracetamol in patients receiving TAP block . The results of our study suggest that caudal block is a better option than TAP block in providing postoperative analgesia after minor abdominal surgery in children. However, TAP block can be considered a valid alternative, especially in case of contraindications to neuroaxial blocks. Moreover, US guidance in performing TAP block decrease the possibility of intraperitoneal needle placement, and permit the use of significantly lower doses of local anaesthetic, thus reducing the risk of toxicity, especially in low-weight patients.

References

1. Rafi AN. Abdominal field block: a new approach via the lumbar triangle. Anaesthesia 2001; 56: 1024-6
2. Transversus abdominis plane block. A systematic review. Abdallah FW, Chan VWS, Brull R. Reg Anesth Pain Med 2012; 37: 193-209
3. Santhanam S, Chan VWS. Ultrasound guided transversus abdominis plane block in infants, children and adolescents: a simple procedural guidance for their performance. Pediatr Anesth 2009; 19: 296-9

0011

Mucosa atomization device vs drop by drop administration of intranasal midazolam for premedication in preschool age patients

Sindija Grinberga[1], Arnis Vilks[2], Biruta Mamaja[2,3], *[1]Children's Clinical University Hospital, Riga, Latvia, [2]Riga Eastern Clinical University Hospital Gailezers, Riga, Latvia, [3]Riga Stradins University, Department of Anaesthesiology and Reanimatology, Riga, Latvia*

Introduction

The administration of premedication in preschool age children is of vital importance, due to their psycho-emotional status. Severe anxiety before anaesthesia can lead to maladaptive behavioral responses in later part of life. Nowadays intranasally drop by drop method with syringe administrated midazolam is widely used as a premedication in this age group.This is associated with nasal burning, irritation, and lacrimation causing unwanted additional stress in children and discomfort. The aim of our study was to compare the effectiveness of two methods of intranasal administration of midazolam as a premedication in preschool age patients- atomized, using MAD (Mucosa Atomization device) and drop by drop administration using syringe.

Methods

290 preschool age patients of 2-5 years of age belonging to ASA I and II were randomly selected. Before the administration of the drug patients were divided in two groups. First group received premedication with intranasal midazolam 0.3 mg/kg by drop by drop administration, using syringe. The second group received the same dose of midazolam, using MAD device, half dose in each nostril. Changes in psycho-emotional status were evaluated before premedication and after 10 min. and 20 min: agitated (clinging to parents and/or crying) or calm (sitting or lying comfortably), refuse or accept face mask. The level of sedation was evaluated using of five-point sedation scale.

Results

Before premedication in both groups, no statistically significant differences in number of children with agitation (20 in the first group and 30 in the second group, p=0.155) were observed.
During the drug administration statistically significant differences in reaction (coughing, sneezing) (119 in the first group and 23 in the second group, p=0.001) and need of parents help (98 vs. 15, p=0.002) were observed and crying was similar in both groups (70 vs. 60, p=0.111).
After 10 min. statistically significant differences in number of children with agitation (60 vs. 30, p=0.001) were observed. After 20 min. statistically significant differences in number of children with agitation who refuses face mask (40 vs. 20, p=0.002) were observed.. In both groups deep sedation level (IV or V) were not observed.

Discussion

Comparing the administration on intranasal midazolam using Mucosa Atomization device and drop by drop method with syringe, we concluded that Mucosa Atomization device causes less discomfort for paediatric patients and is comfortable, safe and easy to use method.

0013

Safety and quality of care in paediatric anaesthesia: Pain Monitor

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Introduction

There is an urgent need to improve children's pain treatment, because pain affects not only children's health but potentially may contribute to their disability and suffering later in life[1]. Most pain scoring systems used in clinical practice rely on patient co-operation and communication[2]. Heart rate and blood pressure, are neither specific nor sensitive for mild to moderate pain in the post operative care unit setting[3]. An objective parameter could help caregivers to evaluate and treat properly children's postoperative pain. Pain alters the electro-galvanic properties of the skin[4]. Skin conductance changes, in response to pain stimuli and can be measured as number of fluctuations of skin conductance (NFSC) values through Pain Monitor Med Storm®. This prospective, observational, blinded study aims to evaluate the validity and feasibility of the NFSC as an objective measure of postoperative pain intensity in children.

Methods

After approval by the institutional ethics committee and obtaining parents' written informed consent, 160 subjects, aged 0-17, were included in this study. Postoperative physiologic parameters, pain intensity evaluated through conventional scoring systems appropriate for children age and NFSC were recorded every 10 min for 30 min. We established the concordance strength between pain score class and NFSC class through the calculation of Cohen's Kappa. To evaluate the sensitivity and specificity of the Pain Monitor to detect pain we calculated the ROC Curves, considering pain scales as the golden standard method to detect postoperative pain in children.

Results and discussion

Data from 160 children were used for statistical analysis (800 postoperative datasets). A good concordance (K 0.82) was found between NFSC and Pain scores. In the first age group (0-18 months), using a 0.1 NFSC cut-off point, the sensitivity of the Pain Monitor for detection of pain that requires analgesic treatment was 65.5% (95% CI 45.7-82.1) and the specificity was 80.8% (73.5-83.9). In the second age group (19-36 months), using a 0.03 NFSC cut-off point, the sensitivity of the Pain Monitor for detection of analgesic need was 73.53% (95% CI 61.4-83.5) and the specificity was 71.7% (95% CI 61.4-80.6). In the third age group (3-6 years), using a 0.28 NFSC cut-off point, the sensitivity of the Pain Monitor for detection of pain that requires analgesic treatment was 58.6% (95% CI 39.1-75.5) and the specificity was 90.9% (86.2-94.3). In the fourth group (7-17years), a 0.17 threshold point of NFSC values had a sensitivity of 52% (95% CI 31.3-72.2) and a specificity of 71.05% (95% CI 64-77.4) for detection of analgesic requirements.

Conclusion

The good correlation of NFSC values with postoperative pain scores makes Pain Monitor a feasible device for postoperative pain assessment in children. Further studies need to evaluate the best NFSC threshold able to detect rescue dose analgesia requirements in postoperative children.

References

1. Carr DB: why children's pain matters. IASP Pain Updates 2005; 13: 1-6.
2. Hullett B., Chambers N., Preuss j. Monitoring Electrical Skin Conductance A Tool for the Assessment of Postoperative Pain in Children? Anesthesiology (2009); 111:513–7.
3. Choo E.K., Magruder W., Montgomery C. Skin Conductance Fluctuations Correlate Poorly with Postoperative Self-report Pain Measures in School-aged Children. Anesthesiology (2010); 113:175– 82.
4. Storm H., Fremming A., Odegaard S. et al. The development of a software program for analyzing spontaneous and externally elicited skin conductance changes in infants and adults Clinical Neurophysiology (2000); 111: 1889-98.

0035

The effect of intraoperative administration of dexamethasone for PONV-prophylaxis on perioperative blood glucose level in obese and normal weight children

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Introduction

The incidence of postoperative nausea and vomiting (PONV) can effectively reduced with dexamethasone as one part of PONV-prophylaxis [1]. As known from a study with adults, the single shot administration of dexamethasone to obese patients with impaired glucose tolerance causes a higher blood glucose level compared to placebo. This effect can persist up to 12h postoperatively [2]. So far no data are available for children. The aim of the present study was the evaluation of perioperative blood glucose changes related to body weight in normal weight and obese children, who received dexamethasone for PONV-prophylaxis.

Methods

After receiving permission by the local ethic committee and written informed consent by the parents, we performed a prospective single-centre study from 01/2011 to 06/2011. 63 children, ASA I-III, 6-16 years scheduled for elective paediatric and orthopaedic surgery (minimum surgery time 30min) were included. All patients received a total intravenous anaesthesia (TIVA) with propofol and fentanyl and a single shot dexamethasone (0.15mg/kg body weight intravenously, maximally 8mg) after induction of anaesthesia. Blood glucose levels were measured after the induction of anaesthesia and 1, 2, 4 and 6 hours after the administration of dexamethasone. Obese children were identified by using BMI calculation and the growth percentiles related to the standard deviation score (SD score). In order to ensure a comparability of hypnosis, anaesthesia depth monitoring (BIS) were used additional to standard monitoring. Statistics: Student's t-test, and covariance analysis (ANCOVA) at $p<0.05$, data are presented as mean±SD.

Results

62 children (11.5±2.9years) were included in analysis with SD-score-Median 0.43, 18 children were overweight/obese (29%). Blood glucose level increased significantly from 5.52±0.52 to 6.74±0.84mmol/l within 6h after dexamethasone without relation to the BMI-SD-score. 4 patients had a hyperglycaemia (glucose≥8.3mmol/l). A correlation between maximal blood glucose level and surgery time (r=0.311) and the baseline blood glucose level (r=0.264) has been detected. 2 children had nausea in the recovery room, no child suffered from vomiting.

Discussion

The present study shows an increase of perioperative blood glucose level within normoglycaemic ranges after a single shot of dexamethasone but could not detect a BMI-dependent effect in children with comparable anaesthesia depth. This is in contrast to children undergoing strabismus surgery, who had no changes in blood glucose levels despite higher dosages of dexamethasone [3]. The reasons can be the minimal invasive and short lasting strabismus surgery compared to our study with major paediatric and orthopaedic surgery, or the 4h observation time after strabismus surgery compared to 6h in the present study. We conclude from our data that low dose dexamethasone can be used in overweight and obese children for PONV-prophylaxis.

References:

1. Becke K et al. Handlungsempfehlung zur Risikoeinschätzung, Prophylaxe und Therapie von postoperativem Erbrechen im Kindesalter. Anästh Intensivmed 2007;48:S95-8.
2. Nazar CE et al. Dexamethasone for postoperative nausea and vomiting prophylaxis: effect on glycaemia in obese patients with impaired glucose tolerance. Eur J Anesthesiol 2009;26:318-21.
3. Madan R et al. Prophylactic Dexamethasone for Postoperative Nausea and Vomiting in Pediatric Strabismus Surgery: A Dose Ranging and Safety Evaluation Study. Anesth Analg 2005;100:1622-6.

0037

Use of preoperative Overnight Oximetry data in children with Obstructive Sleep Apnoea undergoing adenotonsillectomy with a low dose opiate and multi-modal perioperative analgesic regime is associated with a low incidence of postoperative respiratory complications; combined results of a three stage audit process.

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Introduction

Obstructive Sleep Apnoea (OSA) in children is usually treated by adenotonsillectomy, albeit at an increased risk of postoperative respiratory complications (1,2). A two stage audit sequence (OSA1 & 2) at RMCH established local practice that all children with suspected OSA should have preoperative Overnight Oximetry (OOX) to confirm the diagnosis and guide perioperative care. A combined low dose opiate and multimodal analgesic (paracetamol and NSAID's) regime was recommended following the repeated finding of a low incidence of complications. Data incorporating the results of OSA1&2 with a third audit (all OSA patients with available OOX results, 2007- 2011) were analysed.

Methods

Patients with clinically suspected OSA confirmed by Overnight Oximetry (Nellcor N295 Oximeter / Score Analysis SoftwareTM, Nellcor, USA.), who underwent adenotonsillectomy or tonsillectomy were entered into the audit. All audits were approved by the local Hospital Audit Committee. Preoperative oximetry data utilized included SpO2 Low (lowest recorded oxygen saturation) and the Oxygen Desaturation Index ,ODI 4%, defined as the average number of significant desaturations (desaturations >4% below baseline or <89% for at least 10 seconds) per hour of sleep. Patients received a balanced general anaesthetic with sevoflurane. A low dose opiate (recommended maximum total operative morphine dose ≤ 50-100 mcg.kg-1, reduced in severe cases at the anaesthetist's discretion), combined with paracetamol and ibuprofen, had been recommended following OSA1&2. Since choice of intraoperative opiate varied between anaesthetists all doses were converted to a Morphine Equivalent (ME mcg.kg-1) (3). Total Operative ME dose (TOME) was taken as the intraoperative dose plus any additional opiate required postoperatively in recovery. Respiratory complications were defined as None, Minor (supplementary oxygen to keep SpO2 ≥ 95% at any time in the first post op 24 hours) or Major (Epinephrine nebulizer, Nasopharyngeal airway, CPAP or endotracheal intubation required).
Simple descriptive statistics and the Mann Whitney test for comparison of data were used. Data was analysed using StatsDirect V2.7.2 software. Statistical significance was set at P ≤ 0.05.

Results

A total of 252 patients were studied. Postoperative respiratory events for each group are listed in Table1. High dose TOME (>100mcg.kg-1) was used in 26(10.3%) patients. When compared to the low dose TOME group these patients were no different in respect to age (P=0.354), gender (P=0.926), weight (P=0.714), SpO2 Low (P=0.679) or ODI4% (P=0.968). The TOME (mcg.kg-1) was significantly lower in the Low dose group (Median[IQR]) = 50(40-75) v 200(150-200), P=<0.0001). The incidence of respiratory complications was further reduced In the Low dose group (Table 1). Patients in the Low dose opiate group who suffered a respiratory complication were more likely to be younger (P=0.0078) and have a lower SpO2 Low (P=0.0004) and higher ODI4% (P=<0.0001).

	Post op Respiratory Complications			
	None	Minor	Major	Total
All patients	179 (71%)	69 (27.4%)	4 (1.6%)	252
"Low dose" Opiate Group	169 (75%)	55 (24.3%)	2 (0.9%)	226
"High dose" Opiate Group	10 (38.5%)	14 (53.8%)	2 (7.7%)	26

Table 1. Incidence of Postoperative respiratory events for All patients, "Low Dose Opiate" group (TOME ≤ 100mcg.kg-1) and "High Dose Opiate" group (TOME >100mcg.kg-1). (See text for definitions of Minor & Major).

Discussion

A low dose opiate, multi-modal analgesic regime was associated with a very low incidence of major postoperative respiratory complications compared to previously reported OSA series(1,2). Both a reduction in operative and postoperative opiate usage may be important.
The ODI4% may be our best current Oximetry-derived indicator of postoperative risk but further study is required.

References

1. Nixon GM, Kermack AS , Davis M et al. Planning adenotonsillecctomy in children with obstructive sleep apnea:The role of Overnight oximetry. Peds 2004. 113.1. e19-e25.
2. Raghavendran S, Bagry H , Detheux G et al.
3. An Anesthetic Management Protocol to Decrease Respiratory Complications After Adenotonsillectomy in Children with Severe Sleep Apnea. Anesth Analg 2010 . 110 .4. 1093-1101.

Opiate Conversion Calculator. Access at:http://www.globalrph.com/narcotic.cgi

0064

Fenoldopam mesilate reduces lactate peak level during cardiopulmonary by pass for paediatric cardiac surgery

Laura Ressia[1], Paola Grasso[1], Franco Lerzo[1], Anna Maria Carleo[1], Lara Petrucci[1], [1]*Gaslini Children's Hospital, Genoa, Italy*

Aims

To demonstrate the ability of fenoldopam mesilate to reduce the intraoperative level of blood lactate during paediatric cardiac surgery with cardiopulmonary by pass (CPB).
Background: In paediatric cardiac surgery elevation of the blood lactate level indicates a state of anaerobic metabolism and is a marker of inadeguate oxygen delivery. Hyperlactatemia is defined a blood value of lactate >2.2mMol/l . In our experience and in the literature (2) a peak level of lactate is present in 40% of operations with average CPB time > 60'. Hyperlactatemia has recently(1) been associated with higher morbidity and mortality.. Fenoldopam mesilate is a dopamine 1 agonist that appears to improve splanchnic perfusion

Methods

We conducted an open controlled phase II clinical trial. We enrolled 54 patients (Simon's two stage design). Inclusion criteria were weight > 3 < 15 kg, and CPB >60'<180'. We did not include patients who underwent operation with circulatory arrest. Mean age was 4,6 months, mean weight was 5,8 kg . .Indications for surgery were: complete A-V canal defect (12 cases), Tetralogy of Fallot (14 case), arterial switch (4 cases), atrial septal defect (6 case), ventricular septal defect (7 cases), double outlet right ventricle (4 cases), Norwood (1 case), miscellaneous (6 cases). Mean CBP time was 130' .Fenoldopam infusion at dose of 0,2 mcg /kg/min was started 30 minutes before the onset of CPB and stopped at the end of the operation. CPB parameters and blood lactate levels were recorded at serial intervals during the operation and for the first twelve postoperative hours.

Results

Patients that received fenoldopam infusion had significantly lower perfusion pressure during CPB though still within the normal range. We reached the primary end point with 83% of patients being free from a lactate peak during the operation and a reduction 50% in the incidence of lactate peak in the first 12 postoperative hours . In particular among 16 cases in our series that required inotrope drugs to support circulation, no peaks of lactate were observed

Conclusion

Fenoldopam can reduce the peak of lactate during CPB and during the first 12 postoperative hours. Our trial supports the hypothesis that fenoldopam mesilate exerts a protective effect on splanchnic circulation during CPB.

References

1. Alves R, A.L. Aragao e Silva A.L., Kraychete N.C. et al. Intraoperative lactate levels and postoperative complications of pediatric cardiac surgery. Pediatric anesthesia on line pub, March 2012.
2. Munoz R. Laussen PC, Palacio G et al. Changes in whole blood lactate levels during cardiopulmonary by pass for surgery for congenital cardiac disease: a nearly indicator of morbidity and mortality. J Thorac Cardiovasc Surg 2000:119:155-162

0073

Treatment of anxiety at induction of anaesthesia in children: a randomized controlled trial of non-pharmacological approach versus midazolam or placebo.

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Introduction

Induction of general anaesthesia can be distressing for children. There are several pharmacological and non-pharmacological interventions to reduce anxiety of children during induction [1,2]. The aim of this study was to investigate the effects of non-pharmacological premedication compared to the use of midazolam or no intervention. Secondary endpoints: assess post-operative behavioral modifications and parent satisfaction.

Methods

The study was approved by Local Ethical Committee and informed parental consent was obtained. Consecutive children, from Novembre 2011 to April 2012, aged 2-12 years, ASA I-II, scheduled for elective minor surgery were ramdomly assigned by a computer-generated list to one of three groups: Group Midazolam received 0,5 mg/kg oral midazolam; Group Placebo received oral placebo; Group Placebo+Games received oral placebo and a non-pharmacological premedication consisting in aged-related activity (soap bubble and storytelling for children 2-4 years, "The Jungle Game" and "Spots the Differences Easy" for 5-8 years, "Spots the Differences Advanced" for 9-12 years). All children were accompanied to the theatre by one parent. Anxiety level was measured by a consultant in anesthesiology, blinded to the randomization group, through the Modified Yale Preoperative Anxiety Scale (m-YPAS) before and during induction of anaesthesia. Parent satisfaction was evaluated with a questionnaire and post-operative behavioral modifications with a telephone interview (1 day and 1 month after surgery). Anaesthesia was induced with sevoflurane by mask. The groups were compared for statistical significance with Anova and Student's T Test (for comparison one to one).

Results

A total of 162 children were recruited. We found that anxiety level (in terms of m-YPAS score) was significantly lower before and during induction in Group Placebo+Games compared to Group Midazolam (p=0.003-p=0.000) and to Group Placebo (p=0.005-p=0.000). There were no statistically significant differences in the m-YPAS score between Group Midazolam and Group Placebo (p=0.1-p=0.19).

m-YPAS score	Group Midazolam	Group Placebo	Group Placebo+Games	p value
Before Induction	32.90+/-17.98	30.09+/-21.89	28.77+/-14.61	0.017
During Induction	48.88+/-27.28	56.05+/-29.24	33.40+/-19.28	0.001

Conclusions

This study shows that the use of non-pharmacological premedication during induction of anaesthesia, togheter with parental presence, is an effective intervention to reduce children anxiety. Parent satisfaction was high and no significant behavioral modifications were found. In the light of these findings, we decided to routinely implement games at our institution for induction of anaesthesia in children leaving oral midazolam for selected indications.

References

1. Vagnoli L, Caprilli S, Messeri A. Parental presence, clowns or sedative premedication to treat preoperative anxiety in children: what could be the most promising option? Paediatr Anaesth. 2010; 20:937-43.
2. Yip P, Middleton P, Cyna AM, Carlyle AV. Non-pharmacological interventions for assisting the induction of anaesthesia in children Cochrane Database Syst Rev. 2009; 8: CD006447.

0078

The relative position of femoral artery and vein in healthy children under general anaesthesia – An ultrasound guided observational study

Nandlal Bhatia[1], Jai Sivaprakasam[1], Mark Allford[1], Velupandian Guruswamy[1], [1]*Leeds Teaching Hospitals, Leeds, UK*

Introduction

Femoral venous cannulation is preferred in children due to its inherent safety profile and ease of access during acute clinical scenario. Incidence of overlap of femoral vein (FV) by femoral artery (FA) distal to inguinal ligament is reported to be 8-45%[1], while there is relative lack of data in children under anaesthesia. A greater success rate has been reported in paediatric femoral venous cannulation by inexperienced anaesthetists when using ultrasound guidance[2]. Our aim was to study the size of femoral vessels and their relationship to each other in femoral triangle.

Method

A prospective observational study approved by LREC was undertaken in children age less than 7 years undergoing anaesthesia for a surgical procedure. After induction of general anaesthesia under standardised conditions, an experienced anaesthetist who is trained in ultrasound technique, identified femoral vessels, measured their diameters and relationship to each other using an ultrasound probe (Sonosite S-Nerve, USA) at 1cm and at 3 cm from the mid-inguinal point. We also recorded the perception of anaesthetist whether the landmark technique as described in Advanced Paediatric Life Support (APLS) would lead to successful cannulation of femoral vein.

Results and discussion

Descriptive statistics were used to analyse the size of femoral vein and artery in each age group. The incidence of overlap of femoral vein by femoral artery for all the children was 5% at 1 cm and 60% at 3 cm distal from inguinal ligament. The data of overlap of femoral vein by artery at 1 cm and 3 cm distal was analysed using Mc-Nemar test. This test was statistically significant (p value 0.0001- 0.031) for any overlap and also for > 50% overlap when compared at 1 and 3 cm distal to inguinal ligament in all children less than 5 years of age. Only in 80% of the children the puncture site marked by landmark technique led to a finding of femoral vein on ultrasound imaging.

Table1: Age specific data showing percentage of overlap of FV by FA

Age	< 1 mounths	1 - 6 mounths	6 - 12 mounths	12 - 24 mounths	2 - 5 years	5 - 7 years	Total
Incidence of femoral vessel overlap @ 1 cm in percentage							
0%	100%	93%	100%	93%	100%	86%	95%
< 50%	0	7%	0%	7%	0	14%	5%
> 50%	0	0	0	0	0	0	0%
Incidence of femoral vassel overlap @ 3 cm in percentage							
0%	12%	21%	28%	28%	57%	79%	38%
< 50%	36%	36%	36%	51%	14%	7%	29%
> 50%	54%	43%	36%	21%	28%	14%	33%

Conclusion

Femoral artery overlaps the femoral vein by varying degrees, the incidence of which increases from 5% to 60% as we move distally away from the inguinal ligament and especially in children less than 2 years. In 20% of children there is no co-relation between the puncture mark by landmark technique and the ultrasound findings of femoral vein.

References

1. Hopkins JW et al. The anatomic relationship between the common femoral artery and common femoral vein in frog leg position versus straight leg position in pediatric patients. Acad Emerg Med 2009; 16:579–84
2. Aouad MT et al. Femoral Vein Cannulation Performed by Residents: A Comparison Between Ultrasound-Guided and Landmark Technique in Infants and Children Undergoing Cardiac Surgery. Anesthesia & Analgesia 2010; 111:724-72

0079

Comparison between Sterofundin (and glucose 1%) and Normal Saline (with glucose 1%) for intraoperative fluid management in children aged less than 36 months undergoing major surgery. Multisite, Randomized, Open Trial.

Nicola Disma[1], Leila Mameli[1], Giovanni Montobbio[1], Silvia De Benedetto[1], Bruno G Locatelli[2], Valter Sonzogni[2], Alberto Benigni[2], Viviana Prussiani[2], [1]*Dept Anesthesia, IRCCS Gaslini Children's Hospital, Genoa, Italy,* [2]*Dept Anesthesia, Riuniti Hospital, Bergamo, Italy*

Introduction

Neonates and infants have a high metabolic rate and serious risk of perioperative hypoglycemia and lipolysis, but during anesthesia the need for glucose requirement is decreased as consequence of the reduced metabolic rate. Fluid therapy in neonates and children may also be associated with iatrogenic hyponatraemia or metabolic disequilibrium.

The aim of this prospective randomized multicentre open trial was to compare the intraoperative use of an isotonic balanced electrolyte solution with a glucose concentration of 1% (Sterofundin ® - StG) with normal saline with glucose 1% (NsG) in children aged less than 36 months undergoing major surgery. The main outcome was the change in sodium pre and post infusion (Na); secondary outcomes were other electrolytes and acid-base changes, and the need for other drug administration like glucose.

Methods

Once obtained the local ethics committee approval and registered the trial in the EudraCT web site, children with an age under 36 months, ASA risk score of I–III undergoing major surgery were randomized in one of the two study arms. Patient demographics, the performed procedure, hemodynamic data, electrolytes and acid-base analysis before and after infusion were compared between the two groups.

Results

218 children were enrolled in this trial, and age (12 ± 4, range 1–36 months), weight (8 ± 4.9, range 3–15 kg), and mean infusion rate (10.4 ± 3.2, range 4.5–19.6 ml/kg/h) were comparable within the two groups. The Na was 1.2 (SD 0.9) in StG vs 2.2 (SD 1.2) in SfG ($p<0.05$). The Cl (1.5 (SD 0.8) vs 2.2 (SD 2.3 (SD 1.3), in StG and SfG respectively) and the K were also statistically more stable in the StG ($p<0.05$). The need for glucose administration were statistically comparable in the two groups. No adverse drug reactions were reported.

Conclusion

This trial shows that the intraoperative use of sterofundin with 1% glucose helps to avoid sodium, potassium, electrolyte and acid-base dysbalance, in surgical neonates and small children. A careful intraoperative monitoring and adaptation of the infusion rate with the hemodynamic changes is always crucial because the glucose and fluid requirements may vary widely between subjects and kind of surgery.

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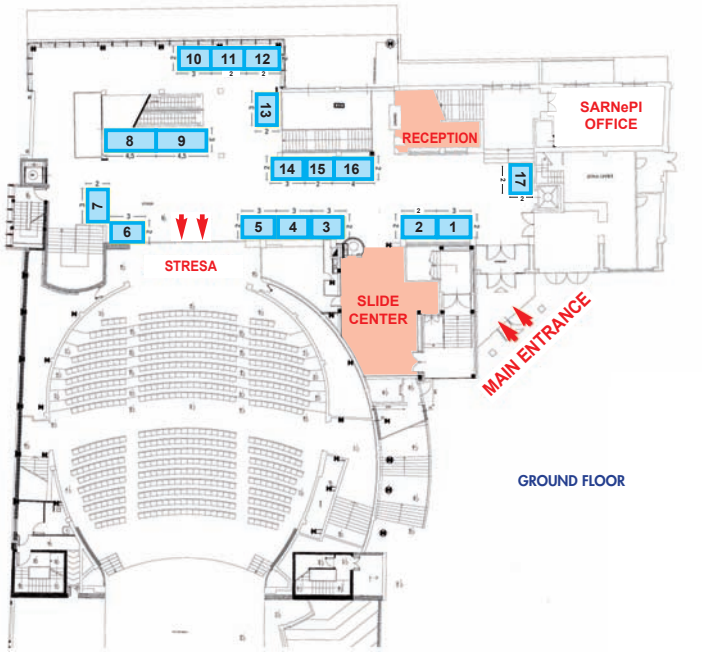

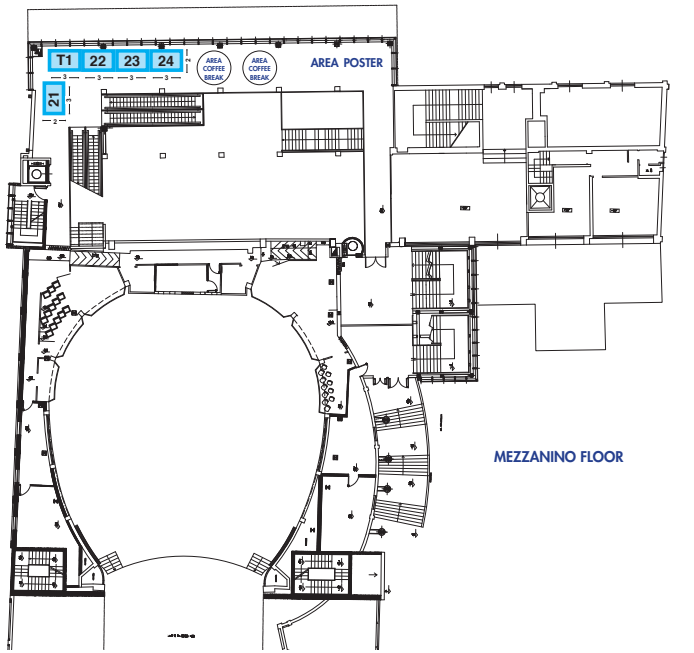

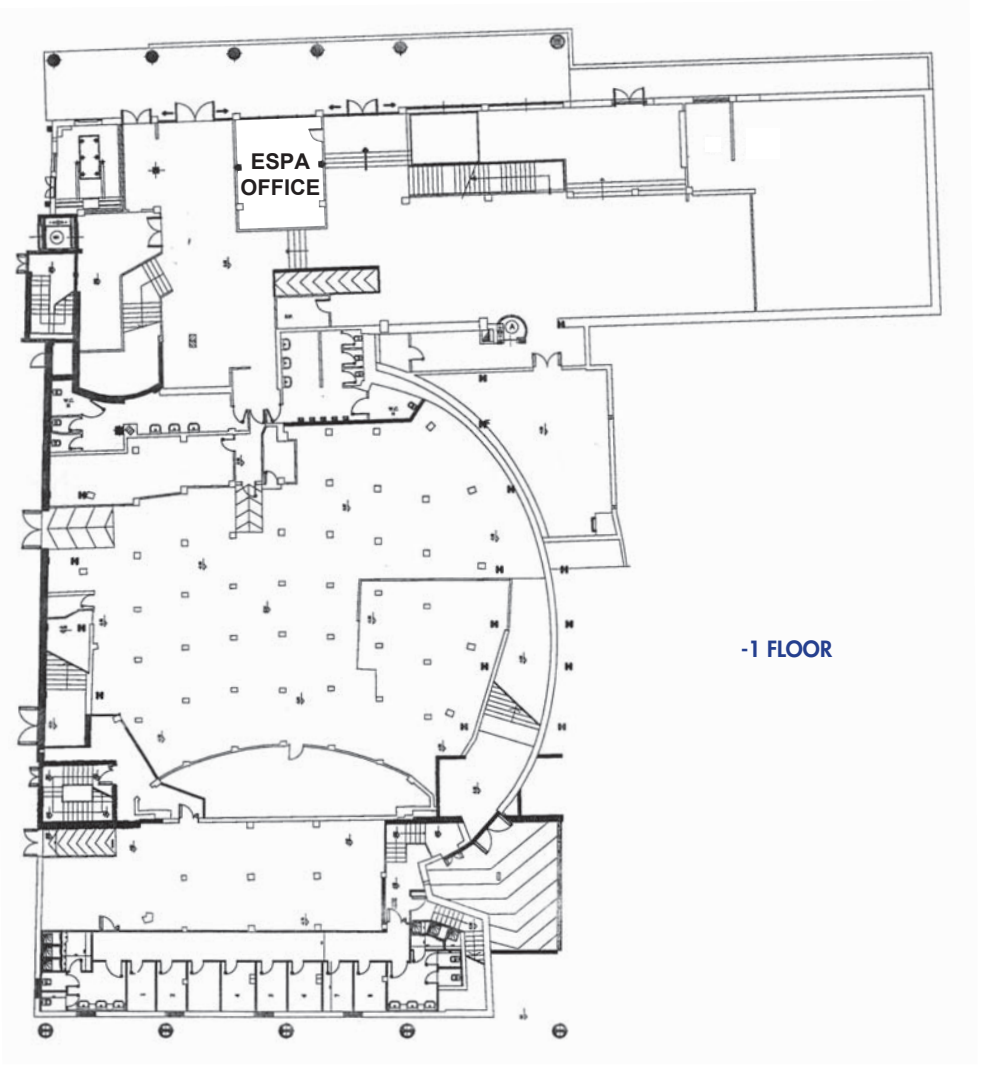

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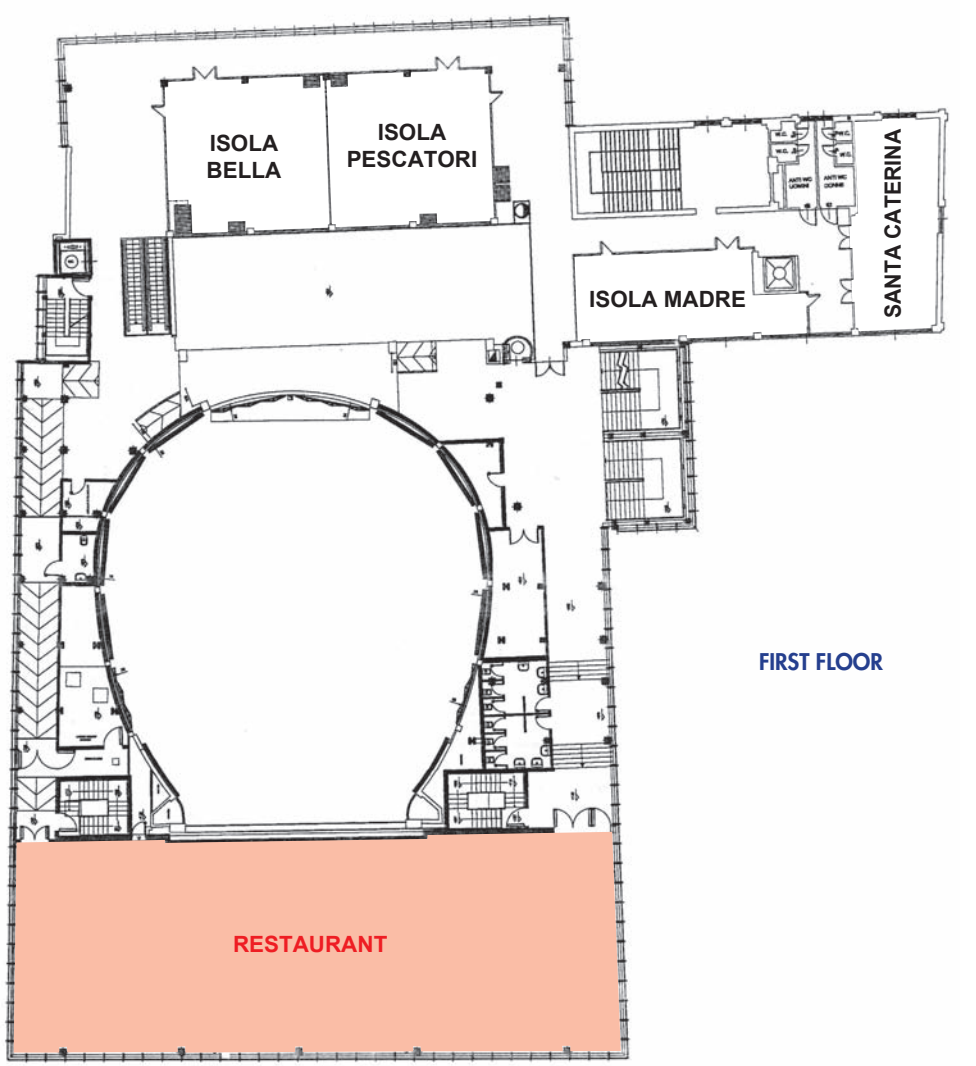
FLOORS PLAN



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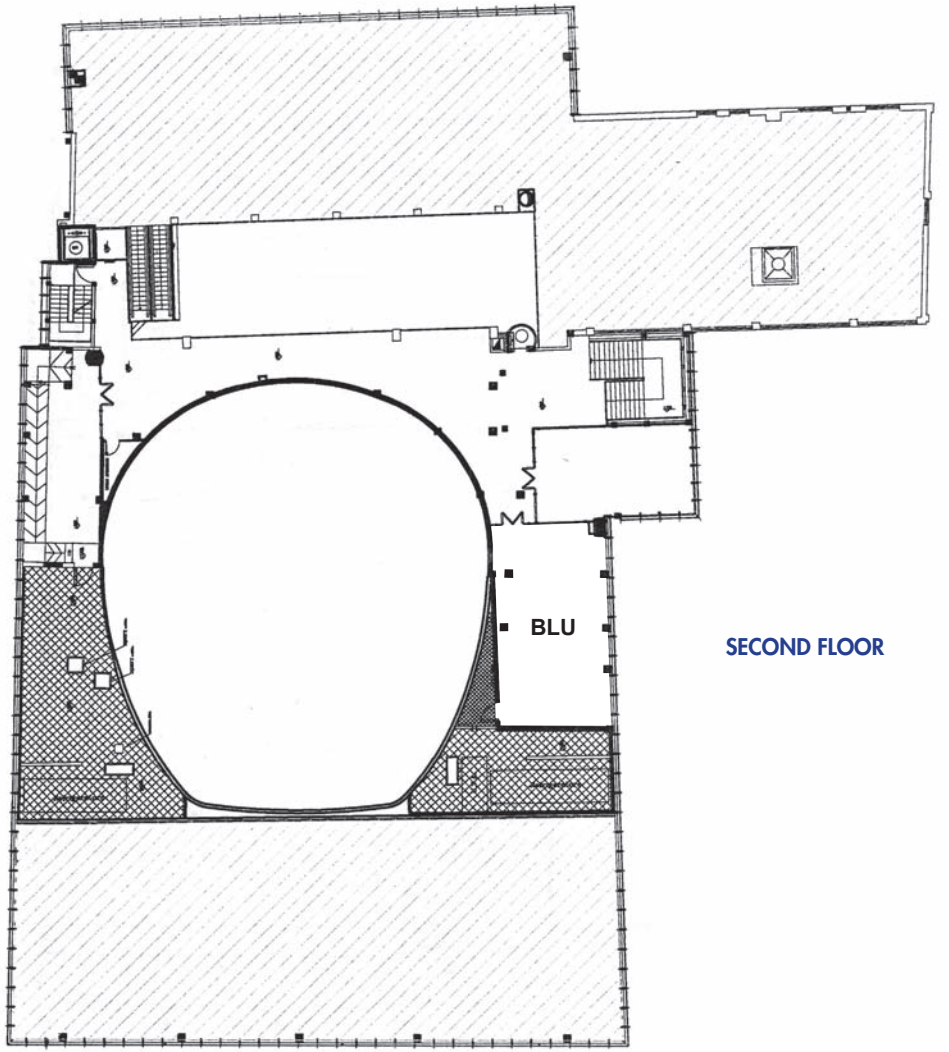

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Thursday, 20th September: 09.00 – 17.00
Friday, 21st September: 08.00 – 17.00
Saturday, 22nd September: 08.00 – 13.00

The registration fee includes:
– Admittance to all Scientific Sessions
– Congress bag (with documentation & congress programme)
– Coffee break (20th, 21st and 22nd September) & Lunch on 21st September
– Welcome Reception on Thursday, 20th September

All registered participants will receive their congress bag on arrival.

OFFICIAL LANGUAGE
All sessions of the scientific programme are in **English** except for the Italian Language session 11.00 – 13.00 hr on Friday, 21st September. There will be no simultaneous translation.

BADGES
Delegates will receive a name-badge at registration. The badge must worn prominently in order to gain access to the congress area during all scientific and social events. Admission will be refused to anyone not in possession of an appropriate badge.

EVALUATION FORMS
The European Society for Paediatric Anaesthesiology is committed to providing regular meetings between European paediatric anaesthesiologists for education and the exchange of ideas. In order to provide you with meetings of the highest possible quality you are kindly requested to complete an evaluation form, which is also a requirement of accreditation by the European Accreditation Council for Continuing Medical Education (EACCME).
Please hand this form in when picking up your certificate of attendance on leaving the congress. Additional blank forms will be available at the registration desk.

S.A.R.N.e P.I.
Società di Anestesia e Rianimazione Neonatale e Pediatrica Italiana

ESPA
European Society for Paediatric Anaesthesiology

CME CREDITS - CONTINUING MEDICAL EDUCATION (CME)

The " European Society for Paediatric Anaesthesiology" or "ESPA 2012" is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialist. The EACCME is an institution of the European Union of Medical Specialists (UEMS), www.uems.net.

The **ESPA 2012 was granted 12 European CME credits** (ECMEC) by the European Accreditation Council for Continuing Medical Education (EACCME) – **EVENT CODE: 7336**

Participants can pick up their certificate of attendance when returning their evaluation form on departure.

Through an agreement between the European Union of Medical Specialists and the American Medical Association, physicians may convert EACCME credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME credit to AMA credit can be found at www.ama-assn.org/go/internationalcme.

EACCME credits

Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity. The EACCME credit system is based on 1 ECMEC per hour with a maximum of 3 ECMECs for half a day and 6 ECMECs for a full-day event.

ECM accreditaton only for Italian Participants:

La Commissione Nazionale per la Formazione Continua ha espresso il proprio parere positivo all'accreditamento provvisorio di START PROMOTION Srl come Provider ECM (numero assegnato 622).
Al Convegno sono stati assegnati nr. **6,5 crediti formativi** per le seguenti Figure Professionali:
• Medico Chirurgo, disciplina di riferimento Anestesia e Rianimazione, Pediatria.

ISTRUZIONI PER I PARTECIPANTI

Al Vostro arrivo alla Segreteria del Convegno, vi sarà consegnato il seguente materiale:
• Un Badge Nominale
• Modulo Dati Personali
• Scheda di Valutazione del gradimento
• Scheda di Valutazione dell'Apprendimento
Per la certifi cazione ECM, è assolutamente indispensabile compilare in ogni parte il Modulo Dati Personali. In caso di compilazione errata, incompleta o incomprensibile, non sarà riconosciuto alcun credito formativo.
Le informazioni richieste nel Modulo Dati Personali sono indispensabili per una univoca identifi - cazione di ogni partecipante e, quindi, per una corretta rendicontazione dell'attività formativa e aggiornamento in ambito ECM. Per ognuna delle singole sessioni di accreditamento, la frequenza dovrà essere del 100% del tempo totale. Al termine del Convegno, il Provider provvederà ad aggiornare i vostri dati e a registrare le Schede di Valutazione del Gradimento.

CREDITI FORMATIVI PER PARTECIPANTI

Il Convegno rientra nella fattispecie " Formazione Residenziale (RES) – Convegni, Congressi, Simposi e Conferenze" con meno di 200 partecipanti.
L'assegnazione dei crediti formativi sarà effettuata successivamente alla chiusura del Convegno.
Il certificato relativo al conseguimento dei crediti ECM per il Convegno verrà inoltrato dal Provider START PROMOTION Srl esclusivamente a mezzo e-mail.

Per qualsiasi comunicazione o richiesta relativa ai crediti ECM, contattare il Provider all'indirizzo:
START PROMOTION SRL – Via Mauro Macchi, 50 – 20124 Milano
Tel. 02 67071383 – Fax 02 67072294 – ecm@startpromotion.it

Al termine del Convegno, il Provider provvederà ad aggiornare i vostri dati, alla verifica dei Questionari e alla registrazione delle Schede di Valutazione del Gradimento.

I tempi di ricevimento dei certificati non saranno inferiori a 100 giorni dalla data di fine Convegno.

VIDEO RECORDINGS

All lectures and Power Points presentations will be video recorded. These recordings will be available at the members' portal of the ESPA website www.eurospa.org after the congress.

POSTER PRESENTATIONS

The posters will be displayed from 13.00 hr on 20th September until 09.00 hr on 22nd September in the two poster areas at the congress venue, the Palazzo dei Congressi. Posters with numbers 0001 to 0029 will be displayed in the foyer on the Mezzanino floor and those with numbers 0030 to 0105 on the first floor.
A jury will walk around the posters during the coffee and lunch breaks on Friday 21st September to assess nominations for the best Poster Prize which will be awarded at the closing ceremony. Presenters are encouraged to stand by their poster during these periods.

SOCIAL PROGRAMME

Welcome Reception
Thursday, 20th September

19.00 - 19.45	**Opera Concert – Palazzo dei Congressi, Stresa** **"Famous Italian Opera Arias"** of *Verdi, Puccini, Donizetti e Leoncavallo*
19.45	Welcome Address
20.00	Restaurant located on the 1st Floor

ESPA Annual Dinner
Friday, 21st September

20.30 Pescatori Island

20.00 Transfer by boat from the pier of the Astoria Hotel, Stresa, to the Pescatori Island – Verbano Restaurant and return after the dinner.

TRAVEL INFORMATION

By Car
Stresa can easily be reached by car, by motorway, along the Milano - Laghi (A8) or Genova- Voltri-Sempione (A26). The exit is Carpugnino-Stresa.

By Train
Stresa can easily be reached by train from Milan, Gallarate, Arona, Domodossola. The distance from Milan Central Station is about one hour.

The railway station at Stresa is located in Via Carducci, a five-minute walk from the Palazzo dei Congressi.
"Trenitalia" national railway company Ph: +39 892921 – Website: www.fsitaliane.it

There are 21 trains a day from the two stations in Milan which stop at Stresa.

From Milan's Porta Garibaldi station, take one of the 10 regional trains heading for Domodossola (1h30 minutes, € 5).

From Milan Central station, take one of the 6 regional trains heading for Domodossola (1h10 minutes, € 5) or one of the 5 international trains heading for Geneva/Basel (55 minutes, € 14).

By plane
Stresa is 45 Km from Milan Malpensa and 95 Km from Milan Linate.

Linate airport is connected to the Milan Central Station, with a bus service managed and controlled by ATM (Milan Transport Company). From Central Station a frequent train service guarantees connection with Stresa.
SEA Call CenterPh: +39 02 74852200 – Website: www.sea-aeroportimilano.it

From Milan Linate to Stresa
Take the shuttle to Milan Central station (25 minutes, € 4) and change for Stresa (as above).

From Milan Malpensa Airport there is a bus service called ALIBUS SERVICE, which allows a connection with the airport to Stresa (and vice versa) during the high season. SEA Call Center Ph: +39 02 74852200
Website: www.sea-aeroportimilano.it

From Milan Malpensa to Stresa
By train (1h 30 minutes, € 4). There are 8 daily connections to Stresa, but you will need to change trains enroute. From the airport's Terminal 1 take the Malpensa Express and get off at Busto Arsizio RFI. Then take the train going to Domodossola.

By taxi (50 minutes, € 100-150). The price varies according to the day and time.

By bus (50 minutes, € 12). From April to September take the scheduled Alibus shuttle for Stresa.

BUS TIMETABLE:

20/09

Malpensa Terminal 1	09.00 hr	09.30 hr	10.00 hr	10.30 hr	11.00 hr	11.30 hr	12.00 hr
Malpensa Terminal 2	09.10 hr	09.40 hr	10.10 hr	10.40 hr	11.10 hr	11.40 hr	12.10 hr
Stresa	10.00 hr	10.30 hr	11.00 hr	11.30 hr	12.00 hr	12.30 hr	13.00 hr

22/09

Stresa	13.15 hr
Malpensa Terminal 2	14.00 hr
Malpensa Terminal 1	14.15 hr

BUS STOPS
Malpensa Terminal 1 - Arrival Ground Floor – Exit 9 – Bust Stop SAF
Leave the airport building through door number 9.
Malpensa Terminal 2 - Bus Stop 12.
Stresa - Palazzo dei Congressi

Ticket price € 12,00 each way per person. The ticket can be purchased on board with cash only.

Reservations for the Stresa shuttle are MANDATORY all for delegates except those ARRIVING on 20th September or LEAVING on 22nd September.

Please refer to the timetable above.

On 22nd September we have scheduled buses at the end of the Congress (see timetable).
Participants leaving at other times should make a booking directly with ALIBUS.

Reservations can be made directly with ALIBUS by:

- E Mail to alibus@safduemila.com
- website www.safduemila.com
- fax, dialing the number +39/0323/552165
- telephone, dialing the number + 39/0323/552172

Bookings must be made before 11.00 hr the day before travel. The "ALIBUS" shuttle service is also available on Sunday and Monday, in which case it is necessary to book on Saturday not later, hrs. 11.00 a.m.

www.euroespa.org

ESPA Congress Prague

In cooperation with the Czech Society of Anaesthesiology
and Intensive Care Medicine CSARIM

ESPA

European Society
for Paediatric Anaesthesiology

September 2014

Czech Republic

Prague

LEARN, SHARE, ENJOY!

NOTES

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