clinical decision support in computerized prescribing can improve the quality and efficiency in drug prescribing.

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A PROSPECTIVE STUDY OF IN-HOSPITAL PEDIATRIC CARDIAC ARREST IN EUROPEAN AND LATINOAMERICAN HOSPITALS

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Background and aims: To study the characteristics of in-hospital cardiac arrest (CA) and the results of resuscitation after the 2005 recommendations of cardiopulmonary resuscitation in children.

Methods: A prospective, international, multicentric study was performed. 124 hospitals from 16 European and Latinoamerican countries participated during 24 months. CA in children between 1 month and 18 years were analysed using the Utstein template.

Results: 543 CA episodes were registered, 252 (46.5%) in 18 Latinoamerican and 290 (53.5%) in 27 European hospitals. Mean age was 44.3 months (48.2% younger than 12 months) and 56.2% males. The most common causes of CA were cardiac (30.4%), respiratory (29.2%) and sepsis (19.7%). 58.8% of the CA took place in the PICU. Sustained return of spontaneous circulation (ROSC) was attained in 68.9% of the patients. Only 33.3% survived. ROSC were higher in European 76% than in Latinoamerican hospital 60.7% ($p < 0.01$). Survival was higher in males (37.9%) than females (27.7%) ($p = 0.018$). Respiratory and cardiac CA have higher survival rates (42%) than sepsis, neurologic and traumatic causes (20.6 %) ($p < 0.01$). CA survival in urgency (20.3%) was lower than in PICU (36.5%), wards (35.3%) or surgery (50%) ($p = 0.01$) and in European (41.9%) than in Latinoamerican hospitals (22.7%) ($p < 0.01$).

Conclusions: Although 69 % of patients who suffered a CA attained ROSC only 33 % of them survived. Survival was higher amongst men. Precipitating causes and localization of CA influence survival and could partly justify differences between European and Latinoamerican hospitals.

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ARE WE PREPARED FOR LIFE-THREATENING PEDIATRIC EMERGENCIES? RESULTS OF A PRE SURVEY OF SIMULATION-BASED TRAINING IN GERMAN PICUS

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Background: Life-threatening events in children are uncommon, but are demanding on the healthcare team. The PAEDSIM working group has organized in-house simulation based trainings (SBT's) for German PICU's, emphasizing the medical aspects as well as the principles of Crisis Resource Management (CRM). In this study, questionnaires were used to evaluate the current education for pediatric emergencies.

Methods: We trained 120 pediatric healthcare providers in four hospitals. Each group, consisting of 8-10 participants, received four hours of SBT. The participants filled out questionnaires assessing their own capabilities before SBT and the education received on pediatric emergencies within their department.

Results: Participants rated themselves rather low (3.5 +/- 1.5) in their competence in managing important pediatric emergencies on a scale from 1 to 6. In particular, their competence in cardiopulmonary resuscitation (3.66 + / - 1.11) and the treatment of cardiac problems (4.06 + / - 0.94) were rated negatively.

Only 36% of physicians (vs. 80% of nurses) receive cardiopulmonary resuscitation training one or more times per year, with only 9% having taken an official course from the European Resuscitation Council and 29,5% attending courses focusing on CRM. **Conclusions:** These data show clearly the divergence between training needs and training

actually taking place in German hospitals. Regular training according to the ERC is still not obligatory. This becomes serious given data showing that pediatric emergency management has significant room for improvement. With the courses from PAEDSIM, the two core competencies are taught via a practice-based and team-oriented approach.

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IS THE EXPRESSION OF VEGF ALTERED AFTER TRACHEAL OCCLUSION IN EXPERIMENTAL MODEL OF CONGENITAL DIAPHRAGMATIC HERNIA?

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Background: Vascular endothelial growth factor (VEGF), an angiogenic factor secreted by pneumocytes-II, may play a role in the pathogenesis of congenital diaphragmatic hernia (CDH). Studies in rodents suggest that it may accelerate lung growth in hypoplastic lungs induced by prenatal nitrofen administration.

Aims: Analysis of pulmonary hypoplasia and quantification of VEGF in fetal lungs rats with CDH induced by administration of nitrofen to pregnant rats and changes after fetal tracheal occlusion (TO).

Methods: Timed-pregnant Sprague-Dawley rats treated with nitrofen on embryonic day 9 without further fetal intervention (group 1) and with fetal TO on day 20 (group 2). Control animals were treated with placebo (group 0). Cesarean section was performed on day 21. Fetuses were weighed, lungs dissected, weighed and frozen for subsequent quantification of VEGF by immunoassay.

Results: 50% fetuses in groups 1 and 2 developed CDH and none in the control group. Fetuses with CDH had significantly lower lung weight and reduced lung weight index/fetal weight than those who did not have CDH. VEGF quantification in those with CDH was lower (2.67 pg/mg) than in the rest (2.97 pg/gm). A trend to higher VEGF expression was observed after TO (data of 20 more fetuses are pending to confirm these results).

Conclusions: With the data available up to date, we found no significant differences in the quantification

of lung VEGF, although we observed a trend toward lower expression of this protein in CDH fetuses. TO could improve pulmonary VEGF expression.

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THE INTERNATIONAL NEONATAL IMMUNOTHERAPY STUDY (INIS). A RANDOMISED PLACEBO CONTROLLED TRIAL OF INTRAVENOUS IMMUNOGLOBULIN THERAPY FOR INFANTS WITH CLINICAL SEPSIS

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Introduction: Neonatal sepsis is a major cause of morbidity and mortality despite antibiotic treatment. Effective adjunctive treatments are needed. Newborn infants are relatively deficient in IgG. Meta-analyses of trials of intravenous IgG for suspected or proven neonatal sepsis suggest reduced all cause mortality but the trials are small and some are of poor quality.

Hypothesis: In newborn infants receiving antibiotics for clinical sepsis, the addition of polyclonal intravenous immunoglobulin IgG (IVIG) therapy reduces mortality and major morbidity compared with antibiotics alone.

Methods: Infants receiving antibiotics for proven or suspected serious infection were randomized to receive either two infusions of IVIG 500mg/kg (10ml/kg) or two infusions of matching placebo (0.2% albumin solution, 10ml/kg) 48 hours apart.

Outcome measures: The primary outcome was mortality or major disability at two years corrected for gestational age.

Preliminary results:

The 2 groups were well balanced in all prognostic variables.

IVIG (n=1759), Placebo (n= 1734)

All babies