

< 80% (3.29 vs. 1.21) per hour decreased. No heart block occurred. However, restlessness was observed more frequently.

**Conclusions** Doxapram was applied to roughly a quarter of all very immature infants. Frequency and severity of apneas appeared to be reduced. Intubation because of apnea was avoided in a large proportion of infants. No severe side effects were recorded. More systematic studies on efficacy and safety of doxapram in premature infants are needed.

## 1650 RATIONAL USE OF ANTIBIOTICS IN NEWBORN

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Side effects of antibiotics must always be considered, especially in neonatal period. Our aim was to analyse the antibiotic use in our neonatal ward (2nd level perinatal care). We analysed number of babies who received therapy, indications and time of starting antibiotics, duration and antibiotics used, laboratory analysis (CBC, CRP, swabs and cultures of babies and mothers) and discharge diagnosis in one-year period.

2299 babies were born in 2011, and 125 (5.4%) received antibiotics. 49% had risk factors for infection. In 62% therapy started in 1st or 2nd day of life, and average duration was 5–7 days, in 83%. Ampicillin+Gentamycin was given in 82%; Ampicillin for GBS colonisation and cephalosporines for UTI. There were no multiresistant strains.

### Diagnosis

Respiratory: 43 (34.4%),  
Asphyxia: 17 (13.6%),  
Urinary tract infections: 15 (12%),  
Sepsis: 6 (4.8%),  
Others: 13 (10.4%),  
Without diagnosis: 31 (24.8%).

Risk factors for infection were present in 20% (ITU group) to 58% (group without diagnosis). Positive laboratory analysis were present from 42% (respiratory problems) to 100% in sepsis and UTI.

Most of the children received therapy for clinical symptoms of infection, mostly RD. The only single risk factor for starting the therapy was chorioamnionitis. Among children without diagnosis, 4 received short-course therapy based on risk factors, 6 because of GBS colonization, some had risk factors accompanied with positive laboratory findings and 10 babies because of positive laboratory findings only.

We noticed the decrease in antibiotic use in our hospital in past few years, specially in prophylactic use and therapy based on laboratory analysis. We consider clinical findings the most important criteria. But we can make further reduction by establishing firm criteria for antibiotic use, improving laboratory techniques and probably shortening the duration of therapy in some children.

## 1651 ANGIOTENSIN II RECEPTOR ANTAGONIST RELATED FETOPATHY - A CASE REPORT

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Fetal angiotensin II receptor antagonist exposure during pregnancy is associated with major congenital malformations including premature birth, oligohydramnios, acute renal failure, pulmonary hypoplasia and hypocalvaria. Fetopathy is mainly caused by renal insufficiency due to severe hypotension and disturbance of renal development. Therefore administration during the second and third trimester of pregnancy is contraindicated.

We report on a 35 year-old woman with arterial hypertension who was referred to our obstetrical department because of oligohydramnios. She reported to receive treatment with Olmesartanmedoxomil (5mg/day). The condition resolved after changing anti-hypertensive treatment to metoprolol at 26 6/7 weeks of pregnancy. The patient was born at term by C-section and showed the following signs of fetopathy: hyperechogenic multicystic kidneys and hypocalvaria. Renal function was normal, nevertheless arterial hypertension was present but treatment was not required. Discharge from hospital was possible at the age of 9 days. Regularly follow-up visits are necessary to monitor renal function and to evaluate long term effects.

Incidence of sartan-related fetopathy is unknown, therefore consistent reporting is mandatory. We present a case with mild presentation of symptoms, probably related to low therapeutic dosage and early change of antihypertensive treatment.

## 1652 EPIDEMIOLOGICAL STUDY ON ACUTE INTOXICATIONS IN THE ADMITTED CHILDREN

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**Objectives** Study on the incidence of acute intoxications (AI) within general pathology and various parameters (sex, social environment, age, etiologic spectrum).

**Material and Method** A retrospective study of AI in the children aged 0–16 years, admitted to the 2<sup>nd</sup> Pediatric Clinic of the Emergency County Hospital Craiova from January 1<sup>st</sup> to December 31<sup>st</sup> 2011.

**Results** 95 children with various AI were admitted, representing 4.1% of the total admitted children; 41 (43.2%) presented acute involuntary intoxications (AII), while 54 (56.8%) acute voluntary intoxications (AVI).

AII: distribution of children according to sex M/F=27/14, social environment U/R=18/23, age group (years): 0–1/1–3/3–5/5–10/10–14/14–16=11/10/9/5/4/2; etiologic spectrum: drugs in 9 children, nitrates in 7, carbon monoxide 7, mushrooms 6, corrosive substances 5, insecticides/anti-parasitary 3, ethylic alcohol 2, medicinal alcohol 1, and acetone 1.

In AVI, the sex ratio was M/F=21/33, social environment U/R=27/27, age group (years): 5–10/10–14/14–16=12/17/25. Causes of AVI: drugs in 32, ethylic alcohol 12, ethno-botanical 4, corrosive substances 3, unknown causes 2, caffeine 1 case. There were registered 2 deaths because of nitrates intoxication, in rural infants, aged 1 and 2 months.

Average period of hospitalization (days): in AII 4.79±3.12 (1–16), in AVI 3.25±1.3 (1–10).

**Conclusions** AI represented 4.1% of the total admitted cases. Drugs represented the most frequent cause both in AII and AVI. AII were more frequent in males and rural areas; AVI prevailed in females. Deaths because of AI represented 2.1% of the total number of AI cases.

## 1653 ACUTE INTOXICATIONS WITH DRUG SUBSTANCES IN CHILDREN - A CLINICAL EPIDEMIOLOGICAL STUDY

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**Objectives** Incidence of acute drug intoxications (ADI) within general pathology and various parameters (sex, social environment, age group, etiologic spectrum, clinical form, average period of hospitalization).

**Material and Method** A retrospective statistic study of ADI in children aged 0–16 years, admitted to 2<sup>nd</sup> Pediatric Clinic, Emergency County Hospital Craiova, over a period of 6 years (01.01.2006–31.12.2011).

**Results** Of the total number of 14427 admitted children, aged 0–16 years, 645 presented acute intoxications with various etiologies, among which 252 had ADI; intoxication type: accidental in 154 (61.1%), voluntary in 98 (38.9%).

Accidental ADI: sex M/F=54/100, social environment U/R=93/61, age group (years): 0–1/1–3/3–6/6–10= 27/68/33/26.

Voluntary ADI: M/F=23/75, U/R=59/39, age (years): 6–10/10–14/14–16= 7/37/54.

Etiologic spectrum in the studied group: AINS/antialgics in 39 (15.5%), methoclopramid 29 (11.5%), anti-epileptics 24 (9.5%), tranquilizers/sedatives 15 (5.9%), neuroleptics 9 (3.6%), parasympatholitics 8 (3.2%), antibiotics/antiparasitary 17 (6.7%), drugs with cardio-vascular effect 8 (3.2%), drug combinations 41 (16.3%), other drugs 12 (4.8%), unknown 50 (19.8%). Clinical forms: mild in 127 (50.4%), moderate 101 (40.1%) and severe 24 (9.5%). No deaths were registered with ADI.

Average period of hospitalization: accidental ADI 3.33±2.54 (1–9), voluntary ADI 3.28±1.24 (1–6) days.

**Conclusions** ADI represented 39.1% of the total number of acute intoxications; 61.1% of ADI were accidental. Most ADI were caused by AINS, methoclopramid, anti-epileptics. ADI prevailed in females, in urban children, both in voluntary and accidental ADI. The clinical forms were mostly mild.

#### 1654 RELATIONSHIP BETWEEN MYOCARDIAL INJURY, OXIDATIVE STRESS MECHANISM AND SEPSIS/SEPTIC SHOCK IN INFANTS SUBMITTED TO SURGERY FOR CONGENITAL HEART DISEASE

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**Background and Aims** A progressive ventricular dysfunction caused by ischemic myocardial injuries remains one of the leading causes of death during the postoperative course in congenital heart disease (CHD). The aim of this study was to investigate the role of oxidative stress in these myocardial injuries.

**Methods** Myocardial injuries and oxidative stress mechanisms were assessed by histopathology and immunohistochemistry and quantified by morphometrical analyses.

**Results** Myocardial injury was observed in pediatric patients submitted to surgery for CHD with cardiopulmonary bypass, followed by lethal exit. Oxidative stress mechanisms were directly related to these particular types of myocardial injuries. Importantly, 4-hydroxynonenal (4-HNE), a marker of lipid peroxidation, is strongly expressed, especially in irreversible myocardial lesions. Although morphologically similar, myocardial injuries observed in patients who evolved with sepsis in the peri-operative period exhibited a completely different set of oxidative stress mechanisms. Increased concentrations of nitrotyrosine protein adducts were observed in these patients, suggesting that peroxynitrite-mediated protein nitration may be the predominant oxidative stress mechanism found in these situations.

**Conclusions** The underlying mechanisms of these lesions seem to be related to the development of ischemia or ischemia/reperfusion followed by oxidative stress mechanisms that vary depending on whether sepsis was present. While the exact mechanism is not fully understood, it has been suggested that endogenous catecholamine release could have a role in this process.

#### 1655 LEVOSIMENDAN AND MILRINONE: A SAFE COMBINATION?

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**Background/Aims** Levosimendan is an inotropic and vasodilator drug. Most protocols suggest avoiding other vasodilators, inodilators after its introduction. The technical data recommends not using with other vasodilators. We report our experience of concomitant use of levosimendan and milrinone in a series of patients.

**Methods** Observational study. Review of medical records of concomitant use of levosimendan (24 hours infusion without loading dose) and milrinone, from June 2009 to December 2011. Multivariate analysis of epidemiologic data, pathology, type of heart failure, indication of the drug and side effects.

**Results** 81 cases received levosimendan. Among them, 64 (79%) received simultaneously milrinone. Mean age 14.8 months (5 days–112 months) 57.8% males. 87.5% were postoperative cardiac surgical patients (41% tetralogy of Fallot). Right ventricular failure was the most common indication (56.9%) followed by left ventricular failure (29.2%) and biventricular failure (12.3%). Diastolic dysfunction was reported in 49.2% of our patients, 46.1% systolic dysfunction and 4.6% both. In 31% of cases both drugs were initiated simultaneously (operating theatre). Milrinone was the first drug in 41.5% cases. The average dose of milrinone was 0.8 mcg/kg/min. 19/63 cases (30%) suffered from hypotension. In 7 cases (11% of total) milrinone was suspended (without association to type of pathology or dysfunction). In the other 12 patients, infusion of milrinone was decreased, but not suspended. Among the cases of right ventricular failure, hypotension appeared in 32.4%, in 10.5% with left ventricular failure and in 55.5% with biventricular. There were no complications associated.

**Conclusions** In our series, administration of levosimendan and milrinone was safe. The appearance of hypotension was controlled and was not associated with other complications. Patients at increased risk of hypotension were those with biventricular dysfunction. Larger prospective studies are necessary to test the safety of this combination.

#### 1656 BIOMARKERS FOR SEPSIS, MULTIPLE ORGAN DYSFUNCTION SYNDROME (MODS) AND MORTALITY AFTER OPEN HEART SURGERY IN CHILDREN

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**Background and Aims** Biomarkers can help to predict risk of unfavorable outcomes after open heart surgery in children.

**Methods** We performed a retrospective cohort of 121 children after open heart surgery. We analyzed the serum blood lactate, base excess (BE), blood glucose, central venous oxygen saturation (SATvc), troponin I, C-reactive protein (CRP), and leukocyte counts in different postoperative days (POd).

**Results** There were 7.4% deaths, 27.3% of sepsis and 60.3% of MODS. For death, showed better power PO1d and PO2d lactate (OR = 24.1 [CI 4–112]) and (OR = 9.7 [CI 1.2 to 85.7]); PO1d EB (OD = 30.6 [CI 2.6 to 351]); PO1d total leukocytes (OD = 5.8 [1.2 to 29.8]) For sepsis, showed better power: PO6h glucose (OD = 2.4 [1.03 to 5.7]); POI and PO3d SATvc (OD = 2.4 [1.09 to 5.8]) and (OD = 25.6 [2.2–298]); PO6h troponin I (OD = 2.8 [1.1 to 6.8]) and PO1d bastonades (OD = 6.5 [1.4 to 29.6]). For MODS, showed better power: PO6h and PO1d SATvc (OD = 12.2 [2.6 to 55.7]) (OD = 2.87 [1.1 to 7.4]) and, POI/PO6h/PO1d troponin-I (OD = 3.2 [1.6 to 8.0]); POI/PO6h CPR (OD = 3.7 [1.3 to 10.8]).