

age 7 months (IQR 5< 10 months). SCr was determined and preoperative and postoperative creatinine clearance (ClCr) was estimated using Schwarz formula. During surgical repair and till the end of the first 24 hours urine was collected to measure ClCr, using the difference in urine (UCr) and SCr concentrations. Urine output, body temperature, duration of aortic cross clamping and cardiopulmonary bypass was recorded.

**Results** Median intraoperative urine output was 2.4 ml/kg/h (IQR 1.29< 3.15 ml/kg/h). Intraoperative SCr rised to 35  $\mu$ mol/l (IQR 27.5< 50.5) vs preoperative SCr 29  $\mu$ mol/l (IQR 24< 32.9),  $p<0.0001$ . GFR declined from preoperative 98.4 ml/min./1.73  $m^2$  (IQR 89.6< 123.04) to intraoperative 39.8 ml/min./1.73  $m^2$ , (IQR 24.9< 65.5),  $p<0.0001$ .

**Conclusion** Open heart surgery in children has severe, but transient effect on expression of renal biomarkers. Before discharge from the hospital both biomarkers returned to normal values.

# 1668 SYSTEMIC INFLAMMATORY RESPONSE SYNDROME (SIRS), MULTIPLE ORGAN DYSFUNCTION SYNDROME (MODS) AND SEPSIS AFTER OPEN HEART SURGERY IN CHILDREN

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<sup>1</sup>T da Rocha, <sup>2</sup>A Botta, <sup>3</sup>LD Mülle, <sup>4</sup>C Ricachinevsky, <sup>5</sup>P Carvalho. <sup>1</sup>Uti Pediátrica Hospital Santo Antonio, Universidade Federal do Rio Grande do Sul; <sup>2</sup>Uti Pediátrica Hospital Santo Antonio, Santa Casa de Misericórdia de Porto Alegre, Porto Alegre, Brazil

**Background and Aim** Circulatory bypass (CBP) causes SIRS and MODS and the study of this prevalence is rare.

**Methods** We retrospectively made a cohort of 121 children operated during August, 2008 to July, 2009 to study the prevalence of SIRS, MODS and sepsis after open heart surgery.

**Results** The median age, weight, CBP time and temperature during CBP were 9 months, 6 Kg, 55 minutes and 32 ° C, respectively. We found 48% of septal defects. During the first hour in PCIU 50.4 (%) had the SIRS criteria with hypothermia present in 96.7(%). Hypothermia was most frequent during all postoperative days except the second when hyperthermia was present in 41.6 (%) vs 29.1(%) of hypothermia. The others SIRS criteria such as elevated respiratory rate, heart rate and leucocytosis were present in 81.3 to 91.7(%), 25 to 37.5 (%) and 25 to 76.5(%) of children, respectively. MODS criteria were present in 22.3 (%) at arrive in PICU. During next postoperative days, MODS was more frequent than SIRS as follows: in the first day 53.8 (%) vs 32.2 (%), second 41.3 (%) vs 39.7 (%), third 29.8 (%) vs 19.8 (%), forth 24.8(%) vs 17.4 (%) and fifth 24.8(%) vs 13.2 (%). After the third, forth and fifth postoperative days 56.2 (%), 62(%) and 69.4 (%) of children, respectively, did not have SIRS or MODS. Prevalence of sepsis was 27.7 (%).

**Conclusion** After open heart surgery in children, SIRS and MODS are more frequent in first 48 hours than other diagnosis.

# 1669 PERIPHERALLY INSERTED CENTRAL CATHETER (PICC) RELATED SUPERIOR VENA CAVA SYNDROME POST PATENT DUCTUS ARTERIOSUS LIGATION

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<sup>1</sup>M Boyle, <sup>2</sup>M Cotter, <sup>3</sup>N McCallion, <sup>4</sup>D Corcoran, <sup>5</sup>A Foran. <sup>1</sup>Neonatology; <sup>2</sup>Haematology, Rotunda Hospital, Dublin, Ireland

**Background and Aims** To assess incidence, management and outcomes of Superior Vena Cava (SVC) syndrome in post PDA ligation patients in the Rotunda Hospital. PICC's are used routinely in post-operative paediatric cardiac patients. Following placement, catheter-related thrombosis occurs in 8% to 45% of paediatric patients. Although uncommon, resultant SVC syndrome significantly complicates management of premature infants.

**Methods** A retrospective chart review of infants undergoing PDA ligation from July 2011 to March 2012.

**Results** 5 patients had PDA ligation within the study period. Average gestation at birth was 25+4 weeks and average birth weight was 0.754kg. Surgery was performed at an average weight of 1.027kg and 26.8 days. 9 PICC lines were inserted; mean of 1.8 per patient with removal following a mean of 12.5 days. 2 cases of catheter related thrombosis, post PDA ligation, resulted in SVC obstruction. Both patients had a PICC in situ at the time of surgery, the other 3 patients did not have PICC access during surgery. SVC thrombosis was detected at a mean of 15 days post operatively. One affected patient died subsequently due to complications.

**Conclusions** Post-surgical catheter related thrombosis is well documented. SVC syndrome can infrequently result as a complication, which may cause severe respiratory compromise leading to high morbidity and mortality. As treatment of SVC syndrome is very difficult, especially in post operative patients and with a trend towards fewer PDA ligations, increased awareness in neonatal units may allow early diagnosis and thrombolytic therapy to prevent the progression of this syndrome.

# 1670 INTERNET ADDICTION AMONG CHILDREN IN FAMILIES OF HIGH SOCIOECONOMIC LEVEL AND THE EFFECTS OF FAMILIAL FACTORS

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<sup>1</sup>SM Kayiran, <sup>2</sup>IT Comert, <sup>3</sup>N Kose, <sup>4</sup>B Gurakan. <sup>1</sup>American Hospital; <sup>2</sup>Aydin University, Istanbul, Turkey

**Background and Aims** Internet use has increased rapidly in Turkey, raising concerns about physical and mental health problems associated with Internet addiction in adolescents. This study sought to describe Internet use among children aged 10–16 years in Turkish families of high socioeconomic level, and to evaluate the effects of familial factors.

**Methods** A questionnaire based on the Internet Addiction Test (IAT) was administered to 329 parents in American Hospital in Istanbul during the September-December 2010.

**Results** Of children and adolescents included in the sample, 45.3% (n: 149) were females, and 54.7% (n: 180) were males. According the reports of parents, 9.1% (n: 30) of children and adolescents were Internet addicts.

**Conclusions** We found that gender, age, and Internet use frequency affected Internet addiction. Although the prevalence of Internet addiction is low among Turkish children, preventive and educational initiatives and the involvement of addiction experts are necessary to reduce the effects of this emerging phenomenon.

# 1671 THE RELATIONSHIP BETWEEN SLEEP PATTERN AND OBESITY IN CHILDREN'S OF TEHRAN CITY

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<sup>1</sup>A Saber Gharamaleki, <sup>2</sup>A Zamani, <sup>3</sup>M Hosseini, <sup>4</sup>S Abedymanesh, <sup>5</sup>K Jaafarian. <sup>1</sup>Faculty of Health and Nutrition, Students' Research Committee, Tabriz University of Medical Science, Tabriz; <sup>2</sup>Department of Nutrition and Biochemistry; <sup>3</sup>Department of Epidemiology and Biostatistics, School of Public Health, Tehran; <sup>4</sup>Department of Nutrition and Biochemistry, Ahvaz Jundishapur Medical Sciences University, Ahvaz; <sup>5</sup>Department of Nutrition and Biochemistry, School of Public Health, Tehran University of Medical Science, Tehran, Iran

**Objective** To determine the relationship of sleep duration and efficiency with obesity in Tehran city children's.

**Methods** This study was conducted in Tehran city with 270 children aged 6 to 9 years. Heights, Weight, were measured and Body mass index (BMI), was calculated. Directly measured height and weight data were used to define overweight and obesity according to the centers for disease Control and Prevention's (CDC) 2000 Growth Charts. Nocturnal sleep duration and sleep efficiency were recorded by the Actigraphy method.

**Results** Sleep duration showed a significant inverse association with weight ( $p<0.05$ ) and height ( $p<0.005$ ) during 7 day and week-days. A significant relationship was found between Sleep efficiency and weight, BMI, weight for age ( $p<0.05$ ) during weekdays and weekend days.

**Conclusion** In the current study, we found Sleep pattern may be an important environmental factor for obesity in school age children's. These findings are important because sleep duration is a potentially modifiable risk factor that could be important to consider in the prevention and treatment of childhood obesity.

## 1672 THE CHIROPRACTIC CARE OF CHILDREN IN EUROPE: RESULTS FROM A PRACTICE-BASED RESEARCH NETWORK

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<sup>1</sup>J Alcantara, <sup>2</sup>J Ohm, <sup>3</sup>K Kunz. <sup>1</sup>Pediatric Chiropractic Research, Life Chiropractic College West, Hayward, CA; <sup>2</sup>Research, The International Chiropractic Pediatric Association, Media, PA, USA

**Background and Aims** Complementary and alternative medicine (CAM) use by children is predicated upon CAM-use by their parents. Of the various practitioner-based CAM therapies for children, chiropractic is the most popular. This study was undertaken to characterize the chiropractic care of children in Europe in a practice-based research network (PBRN).

**Methods** This study was approved by the IRB of Life University (Marietta, GA, USA). European chiropractors and their patients participated in a PBRN observational study to characterize the chiropractic care of children.

**Results** A convenience sample of 14 chiropractors (10 females; 4 males; average age = 39.36 years; average practice experience = 11.00 years) participated in this study and recruited a convenience sample of 64 parents whose child was receiving chiropractic care. Referrals patterns indicated 3 "often" received referrals from MDs while 13 indicated "often" referring patients to MDs.

Of the 64 children (34 females; 30 males; median age = 7.38 years; complaint duration average of 1.42 years), 47% had previously or were currently attending medical care while 53% did not. Motivation for care ran the spectrum of pediatric clinical presentations from musculoskeletal (i.e., scoliosis) to non-musculoskeletal (i.e., colic, enuresis) in addition to health promotion and disease prevention. Perceived effectiveness by 72% of parents was high as monitored using a Likert Scale.

**Conclusion** European children attend the care of chiropractors for chronic recurrent conditions with high parental perceived effectiveness. We support further research to examine the factors for integrative pediatric care.

## 1673 OSTEOPATHY IN INSULIN-DEPENDANT DIABETES MELLITUS; A NEGLECTED COMPLICATION

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HA Bin Nakhi, N Al Zanti, Z Qabazard. *Pediatrics, Adan Hospital, Kuwait, Kuwait*

The main aim of management of insulin dependent diabetes (IDDM) is to prevent the acute as well as the long term complications. Recent studies suggest that IDDM in children is associated with significantly reduced bone mass density (BMD) values which may manifest as osteopenia in the growing bone. We hereby report three cases of IDDM males who were found to have low BMD and review the literature concerned with this issue.

Case 1: Eighteen years old, Kuwaiti boy known to have IDDM for last 8 years. His serum glucose is fairly well controlled with 9% HbA1C.

Case 2: Eighteen years old, Kuwaiti boy known to have IDDM for last 5 years. His serum glucose is well controlled with 7% HbA1C.

Case 3: Nineteen years old, Kuwaiti boy known to have IDDM for last 10 years. His serum glucose is poorly controlled with 12% HbA1C. BMD was measured due to their complain of bone ache. The lumbar spine Z-scores BMD was significantly lower at the vertebrae (osteopenic range) than those of healthy population at the same age.

**Conclusion & recommendation** Young males with type 1 diabetes exhibit significantly lower BMD values at the vertebrae which may be manifested as osteopenia in the growing bone. This may not be a late complication of type 1 diabetes and seems not to be related to the duration of the disease or to glycemic control. Therefore we recommend bone density scan for all young males with type-1 diabetes to measure BMD and try to prevent diabetic osteopenia through therapeutic intervention.

## 1674 A REVIEW OF THE MEDICAL REPORTS SUBMITTED TO EDUCATION DEPARTMENT AS A PART OF THE SPECIAL NEEDS ASSESSMENT PROCESS

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UR Srirambhatla, H Al-Hadi. *Ealing Hospital NHS Trust, Brent Community, London, UK*

**Background and Aims** It is believed that the medical reports submitted to the Education Department are wordy and repetitive. The aims of the audit were to create clear and concise reports for the Education as a part of the special needs assessment and to test the above hypothesis.

**Methods** It is a retrospective qualitative analysis of the medical reports submitted to the Education department by a busy Community Paediatrics department of a District General hospital. 46 reports which were submitted to the Education from January 2011 to April 2011 were analysed through a standardised audit questionnaire.

**Results** Of all 46 reports, 100% had parental views expressed, 98% had no repetition, 86% had some documentation about the behaviour, in 85% the summary was clear and concise with appropriate recommendations, 82% had documentation about the hearing and 80% had documentation about the vision and developmental milestones. On the other hand only 56% had some documentation about the medications, 47% had a problem list, 28% had documentation of learning ability and 8% had documentation about strengths.

**Conclusions** The hypothesis that the medical reports are wordy and repetitive is wrong however there should be clear headings for problem list, medications, vision, hearing and developmental milestones. It was found that the existing template for the medical reports was not followed. As a result of this audit, a new template for the medical reports was developed to be used by the Community Paediatricians in an attempt to provide clear and concise reports for the Education Department.

## 1675 ECHOCARDIOGRAPHIC EVALUATION OF CARDIAC STRUCTURE AND FUNCTION IN OBESE EGYPTIAN ADOLESCENTS

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<sup>1</sup>H Atwa, <sup>2</sup>H Mohamed, <sup>3</sup>F Abbas, <sup>3</sup>O Saleh. <sup>1</sup>Pediatric; <sup>2</sup>Faculty of Medicine, Suez Canal University; <sup>3</sup>Cardiology Department, Faculty of Medicine, Suez Canal University, Ismailia, Egypt

**Objective** To detect structural and functional changes in the left and right ventricles in obese Egyptian adolescents.

**Methods** Anthropometric and echocardiographic parameters, including tissue Doppler imaging, were obtained from 70 obese