

Background and Aim Although hypoalbuminemia has been recognized as a marker of poor outcome in adult patients, this association has not been demonstrated in a general population of pediatric critically ill children, and studies have not considered non-nutritional factors that may influence albumin concentrations. This study aimed to determine whether hypoalbuminemia is associated with mortality and morbidity of critically ill children while considering the clinical severity of the patients.

Methods This was a prospective study involving 178 children admitted to the ICU. The outcome variables studied were ICU mortality, severity of organ dysfunction, free-ventilator days and free-ICU days. The outcome variables were as follows: nutritional status, Pediatric Index of Mortality (PIM 2), serum albumin, C Reactive Protein and lactate concentrations. Children with liver failure and chronic kidney disease were excluded.

Results Mean serum albumin concentration upon admission among survivors was 3.16 ± 0.66 versus 2.63 ± 0.67 in non-survivors ($p=0.015$). The mortality rate was 6.4% (11/178). In a multiple logistic regression model, adjusting for PIM 2 score, lower albumin concentrations were independently associated with increased organ dysfunction (OR: 0.18, 95% CI: 0.06–0.53; $p=0.002$) and mortality (OR: 0.22, 95% CI: 0.07–0.76; $p=0.017$). In a multiple linear regression model, adjusted for PIM2, malnutrition and other potential confounders, lower albumin concentrations were associated with fewer free-ventilator days ($p=0.024$) and free-ICU days ($p=0.028$).

Conclusions Children with hypoalbuminemia at admission are at a greater risk of organ dysfunction and mortality, and longer time of mechanical ventilation and length of ICU stay, independent of clinical severity and nutritional status.

826 BEDSIDE C-REACTIVE PROTEIN TESTING IN FEBRILE CHILDREN REDUCES LENGTH OF STAY AT THE EMERGENCY DEPARTMENT

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Background and Aims C-Reactive Protein (CRP) is an important diagnostic marker in the evaluation of febrile children. Aim is to study if bedside CRP testing reduces the length of stay (LOS) of febrile children at the emergency department (ED).

Methods We conducted a before-after study of previously healthy children with fever, aged 1 month to 16 years, who attended the paediatric ED of the Erasmus MC - Sophia, Rotterdam, The Netherlands, between 2008–2011. Bedside CRP testing was implemented in 2009, while conventional CRP testing remained optional. We used multivariable linear regression analysis to study the effect of introducing bedside CRP testing on (log transformed) LOS at the ED.

Results In the pre-implementation cohort we included 651 children; 319 (49%) had a conventional CRP ordered at the discretion of the physician. In the post-implementation cohort we included 1376 children; 703 (51%) had bedside CRP and 223 (16%) conventional CRP testing. Bedside CRP reduced the median LOS to 148 minutes (interquartile range (IQR): 109–201); in the pre-implementation cohort this was 176 minutes (IQR: 132–231) ($p<0.001$). LOS of children with conventional CRP was similar between the two cohorts. Other important determinants of (log)LOS were hospitalisation (beta: 0.32 (se: 0.04), $p<0.001$), transfer to a different hospital (0.53 (0.04), $p<0.001$) and shift of presentation (daytime: 0.25 (0.03), $p<0.001$; evening: 0.19 (0.03), $p<0.001$; night = reference).

Conclusion CRP bedside testing substantially reduces LOS at the ED for children with fever. Other important determinants of LOS were hospitalisation and time of presentation.

827 EVOLUTION OF OTITIS MEDIA IN CHILDREN OF THE FIRST 7 YEARS OF LIFE IN MOLDOVA

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Background Otitis media (OM) is a common problem for primary care, pediatricians and otorhinolaryngologists.

The Aim of our work is to analyze the evolution of OM in children of the first 7 years of life after respiratory tract (RT) pathology.

Subjects Children from 1 to 7 years of life (2785) without evident OM after standard treatment of RT pathology - bronchitis, pneumonia; RT infection-prone children; chronic nasal breathing difficulties. Healthy children of the same age were included in the control group.

Outcome measures Screening tympanometry, otoscopy; audiology assessment and otomicroscopy for children who failed the screening tests, paranasal sinuses evaluation, otological follow up for children with middle ear pathology during 2 years.

Results We diagnosed OM in 68% of cases from RT pathology group and in 6% of cases from control group (p less than 0.001). Acute middle ear effusion was presented in 53%, chronic OM with effusion in 38%, recurrent OM in 9%. Chronic and recurrent OM was related with RT infection-prone children (p less than 0.01), age younger than 5 years of life (p less than 0.01) and sinusitis (p less than 0.01). Adhesive and chronic OM was recorded during otomicroscopy and surgery in 12% of cases.

Conclusions Screening for OM is important for children with recurrent and chronic RT pathology. These groups of patients need comprehensive diagnostic management and intensive treatment, including surgical one. In healthy children OM is a relative rare and temporary condition.

828 VITAMIN D STATUS IS NOT ASSOCIATED WITH THE RECURRENT WHEEZY IN INFANCY

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Low vitamin D status have been found to be associated with the risk of acute upper and lower respiratory tract infections. The deficiency of vitamin D was the significant risk factors contributed to the post-bronchiolitis wheezing in children.

We aimed to investigate the association between vitamin D status and occurrence of recurrent acute bronchiolitis. The children with acute bronchiolitis who aged 2 months to 2 years were hospitalized between December 2008 and April 2009 in the Ankara Training and Research Hospital, Ankara, Turkey were included in the analysis.

This study was prospective and case-control study. We used a questionnaire addressing demographic factors, exposure to sunlight and vitamin use.

We defined children with recurrent wheeze as = 3 wheezing attacks.

In total, 56 cases and 30 controls were enrolled. The mean age of all children was 12 ± 7.2 months (2 months- 2 years). The mean of serum 25-OHD3 was 138 ± 56.7 nmol/L in total patients, 134.3 ± 55.6 nmol/L in cases and 145 ± 59.2 nmol/L in control group. There was not any significant difference between cases and controls in 25-OHD3 levels ($p>0.05$).

The mean of serum 25-OHD3 was 132.4 ± 58 (10–263) nmol/L in group 1 ($n=42$) and 140 ± 49 (75–208) nmol/L in group 2 ($n=14$), the difference was not statistically significant ($p>0.05$).

There was no significant correlation between the number of wheezing attacks ($p>0.05$).

No correlation between vitamin D levels and acute bronchiolitis was found but this may be the result of few numbers of patients that we studied with.

829 EVALUATION OF IL-6 AND HIGHLY SENSITIVE CRP VALUE IN CSF AND SERUM CHILDREN REFERRED TO PEDIATRIC EMERGENCY ROOM

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Introduction Acute bacterial meningitis which is a pediatric emergency with high mortality and morbidity, must be diagnosed and treat promptly. Determination of some inflammatory mediators example IL-6 and hsCRP were useful in differential diagnosis of bacterial and viral meningitis.

Objectives Determination of hs CRP and IL6 in serum and CSF in children suspected meningitis.

Materials and Methods From of children that hospitalized in pediatric emergency ward and for they performed lumbar puncture, 1cc serum and csf of they were taken to laboratory ward and have measured IL-6 with Elisa method and hsCRP with Immunoturbidimetry method patients were followed up and Finally we compared levels of this two mediators.

Results From 81 cases, 27 cases (33/3%) were bacterial meningitis 27 cases (33/3%) were viral meningitis and 27 cases (33/3%) were Normal. IL-6 concentration in the csf and serum were significantly raised in cases of bacterial meningitis ($P=0/001$, $P=0/01$) but hsCRP concentration in the CSF and serum we not significantly raised in cases of bacterial meningitis ($p=0.46$, $p=0.29$). Mean IL-6 in serum in bacterial meningitis was (50.01) and in viral meningitis was (10.64) mean IL-6 concentration in the CSF in bacterial meningitis was (180.74) and in viral meningitis was (39.08) mean hsCRP in CSF in bacterial meningitis was (2.22) and viral meningitis was (1.29).

Conclusion The measurement of IL-6 in the CSF and serum is potentially a very useful diagnostic tool for differential diagnosis of bacterial and viral meningitis.

830 THE VALUE OF MEAN PLATELET VOLUME IN THE DETERMINATION OF COMMUNITY ACQUIRED PNEUMONIA IN CHILDREN

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Background The aim of this study was to evaluate whether mean platelet volume (MPV) could be used for the diagnostic tool of community acquired pneumonia (CAP) and for making the decision for hospitalization.

Methods The computerized records of children aged 1 to 18 years who were diagnosed with CAP based on WHO criteria were evaluated. A standard protocol was followed, and patients with severe CAP were hospitalized. CAP patients were divided into two groups based on disease severity. The control group consisted of age- and gender-matched healthy children who attended the "Well-child" clinic during the study period. Values for hemoglobin, white blood cell count (WBC), platelet count, MPV and C-reactive protein (CRP) obtained on first presentation were recorded for each patient.

Results A total of 139 patients were diagnosed with CAP during the study period, 82 (58.9%) of which had severe disease, which required

hospitalization, while the remaining 57 (41.4%) were followed-up as outpatients. The control group consisted of 61 healthy children. Patients with CAP had lower MPV values than their healthy counterparts (7.14 ± 0.70 vs. 8.35 ± 1.26 fL; $p<0.001$). Following ROC analysis, the cut-off value established for MPV was 8.05, which had a sensitivity of 91% and a specificity of 51% for making a diagnosis of CAP. Patients with severe CAP that required hospitalization had significantly higher CRP levels than those who were followed-up on an out-patient basis ($p<0.001$).

Conclusions Our findings suggest that MPV could be used for the diagnosis of CAP in children.

831 AN ANALYSIS OF THE PROGRESSIVE CLINICAL DETERIORATION IN THE CASES WITH SUBACUTE SCLEROSING PANENCEPHALITIS

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Subacute sclerosing panencephalitis (SSPE) is devastating progressive neurodegenerative disorder of the central nervous system by an aberrant measles virus. SSPE is still important health problem in countries where measles immunization is incomplete and in world regions where genetic polymorphism to this particular infection is present. We aimed to make a retrospective analysis of the clinical and laboratory findings and prognostic factors of children with SSPE.

Method A total 55 consecutive cases (22 female, 33 male), aged 5–19 years, followed-up for SSPE at the Pediatric Neurology Department were included. The risk factors for progression time of SSPE from stage I–II to IV according to the criteria of Jabbour examined were gender, age at diagnosis of SSPE, presence of neuroimaging abnormalities, age of patient during measles infection and the antibody index for measles. SSPE risk factors were obtained through a questionnaire via personal interviews and the medical records and were assessed using Mann-Whitney U, Student t and Pearson correlation tests.

Results Presence of neuroimaging abnormalities, gender, age at diagnosis of SSPE, presence of neuroimaging abnormalities, age of patient during measles infection and the antibody index for measles were not associated with a progressive clinical deterioration ($p>0.05$). 66.7 percent of cases were vaccinated with measles vaccine, 43.5 percent of cases have had measles infection before age of 9 months.

Conclusion Viral, host and environmental factors are probably involved in the development and progression of SSPE. Successful measles vaccination programmes which accordance with the requirements of that country can protect the population against SSPE.

832 ACUTE TRANSVERSE MYELITIS IN A PEDIATRIC CASE OF LYME DISEASE

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Background and Aim A broad range of neurologic disorders have been described in children with Lyme disease. In contrast, there are few reports of transverse myelitis in pediatric Lyme disease patients.

Case Report A 12-old girl admitted with the complaints of weakness in legs, sensory loss in lower limb, and backache for 10 days. Mental status, cranial nerve, and upper-extremity motor and sensory examinations produced normal results. The strength in his iliopsoas and hamstring muscles was scored 2/5. Deep tendon reflexes