

hearing loss. Infected infants received one-year therapy (pyrimethamine/sulfadiazine); 1/13 infant developed neutropenia as adverse therapy effect.

At a median age of 2 years all infected infants had a normal psychomotor development (range 1–10 years).

Conclusions It is advisable to perform IgM/IgG-WB on infant serum and the compared analysis for mother-infant pairs within the first month of life when high risk factors for Toxoplasmosis transmission are present.

925 ANTIBIOTIC RESISTANCE AND PNEUMOCOCCAL CONJUGATED VACCINES COVERAGE OF *STREPTOCOCCUS PNEUMONIA* FROM MIDDLE EAR FLUID OF CHILDREN < 5 YEARS

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^{1,2}O Falup-Pecurariu, ³E Leibovitz, ²A Mercas, ²R Lixandru, ²L Bleotu, ²C Zavarache, ⁴C Falup-Pecurariu, ³N Porat, ³R Dagan, ³D Greenberg. ¹Department of Pediatrics, Faculty of Medicine, Transilvania University; ²Department of Pediatrics, University Children's Hospital, Brasov, Romania; ³Pediatric Infectious Disease Unit, Soroka University Medical Center, Ben-Gurion University, Beer-Sheva, Israel; ⁴Faculty of Medicine, Transilvania University, Brasov, Romania

Aims A prospective study was initiated in Brasov, Romania in 2009 to assess the antibiotic resistance pattern of *Streptococcus pneumoniae* (*Pnc*) isolated from middle ear fluid in children with acute otitis media (AOM) < 5 years old.

Methods Patients diagnosed with AOM who underwent tympanocentesis or presented with purulent otorrhea of < 24 hours duration were enrolled.

Results 206 patients were enrolled, 132 (64%) episodes occurred in children < 2 years old; 105 (51%) were culture-positive. 108 isolates were recovered: *Pnc* - 75 (67%), *H. influenzae* - 26 (24%) and others - 7 (9%). Nonsusceptibility to penicillin was found in 25/27 (93%) [MIC > 1.5 µg/mL]. *Pnc* resistance to TMP/SMX, erythromycin and clindamycin and MDR (multidrug resistance) were 22/27 (82%), 16/27 (59%), 13/27 (48%) and 15/27 (56%), respectively. Of the 39 (54%) *Pnc* serotyped the most common were: 19F (26%), 6B (18%), 14 (15%), 23F (15%) and 19A (8%). Penicillin highly resistant was found in 84.6% (11/13): 2–6B, 6–19F, 2–14 all included in the PCV 7-valent (PCV7), except for 2 isolates: 9A, 22F. Out of the 13 highly resistant serotypes 7 (53.84%) were multi drug resistant and all of them were 6B or 19F. 35/39 (90%) of all SP isolates are included in PCV-13.

Conclusions The proportion of penicillin resistance *Pnc* isolated from MEF was extremely high as well as resistance to other common antibiotics. Coverage of PCV7 and PCV10 vaccines was equal. The PCV13 coverage was 90%. Most antibiotic resistant serotypes were included in the PCV13.

926 HAEMOPHILUS INFLUENZAE IN CHILDREN: RESISTANCE TO SIX OTHER BETA-LACTAMS AMONG AMPICILLIN-RESISTANT STRAINS

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S Mzilem, H Smaoui, A Kechrid. Children's Hospital of Tunis, Tunis, Tunisia

Background and Aims *Haemophilus influenzae* (Hi) is a human pathogen responsible for various infections in both children and adults.

We describe in this study the susceptibility patterns and β-lactam resistance mechanisms of 62 ampicillin-resistant H.i strains isolated from children at the children's hospital of Tunis during 2009 and 2010.

Materials and Methods All strains were identified and serotyped using conventional methods. Antimicrobial susceptibility was determined by E-test. The antibiotics tested were amoxicillin,

amoxicillin-clavulanate, cefixim, cefuroxim, cefotaxim, cefpodoxim and imipenem. The β-lactamase production was performed using the nitrocefin test. We determined the resistance genes (*bla*_{TEM-1}, *bla*_{ROB-1} and *ftsI*) by PCR.

Results Isolates were identified as non capsulated and were classified into 3 groups according to their β-lactam resistance mechanisms: β-lactamase positive ampicillin-resistant (BLPAR: 50%); β-lactamase negative ampicillin-resistant (BLNAR: 40.32%) and β-lactamase positive amoxicillin-clavulanate-resistant (BLPACR: 9.68%). All strains showed high amoxicillin, amoxicillin-clavulanate, cefuroxim and imipenem MICs. Among these, the less active one was imipenem with MIC₅₀ > 32 mg/l in all strains. The highest MICs of cefuroxim were in BLPACR strains (2–4 mg/l). MICs ranges of this antibiotic were 0.5–6 mg/l in BLNAR and 0.125–4 mg/l in BLPAR. Cefotaxim, cefixim and cefpodoxim were the most active agents tested against our strains.

Conclusion This study indicates that many β-lactams are ineffective among some Hi strains. So, it's important to have an appropriate usage of antibiotics to stop these phenomena. We must make other investigations to know if these strains belonged to the same clone or if it's a question of an outbreak in our hospital.

927 RHINOVIRUS INFECTIONS IN HIGH-RISK CHILDREN

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¹S Al-Hajjar, ¹O Al-Ahmed, ²S Al-Thawadi. ¹Pediatrics; ²Pathology and Laboratory Medicine, King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia

Background Human rhinoviruses (HRVs) are recognized as major cause of cold and flu-like illness.

Objectives To analyze the clinical features and disease burden for children with underlying medical disorders and documented HRVs infections.

Methods This is a retrospective study that include 48 children who were hospitalized for acute respiratory illnesses in KFSHRC between October 2007 and June 2010. HRVs in nasopharyngeal aspirates, swabs or Bronchoalveolar lavage were detected by nucleic acid detection tests in addition to 13 common respiratory viruses.

Results HRV was the most frequently detected virus 27% (48/181) in hospitalized children with acute respiratory disease. 63% of patients had chronic medical conditions and 37% of patients had immunocompromising conditions. The median age was 22 months, 58% were male. HRV showed broad seasonal activity. The peak incidence was in November, December and June. The most common symptoms were cough (58%), fever (56%), dyspnea 40% and running nose (25%). Creptitation and wheezes, were present in 23.9%, 20.8%, respectively. Twenty-two of 48 patients (46%) had chest radiographic abnormalities, most commonly atelectasis or lobar infiltrate. Seventeen (35%) patients needed intensive care unit (ICU) admission and thirteen (76%) required mechanical ventilation, there were two bacterial and one fungal co-infection documented in this patient. The mean duration of ICU stay was 17.9 days. Fifteen (88%) of the HRV-positive patients survived, while 2 (12%) patients died. Co-infection with other viral respiratory pathogens was common (17%).

Conclusion HRVs were associated with severe lower respiratory tract infection and hospitalization in children with chronic or immunocompromising conditions.

928 NEUTROPHIL CD64 INDEX (CD64IN) IN CEREBROSPINAL FLUID IN DIAGNOSING BACTERIAL VENTRICULITIS IN CHILDREN WITH EXTERNAL VENTRICULAR DRAINAGE

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¹M Groselj-Grenc, ¹M Derganc, ²AN Kopitar. ¹Department of Paediatric Surgery and Intensive Care, University Medical Centre Ljubljana; ²Institute of Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Background and Aims Children with temporary external ventricular drains are prone to nosocomial infections. Diagnosis of bacterial ventriculitis in these children is challenging due to frequent blood contamination of cerebrospinal fluid (CSF), presence of chemical ventriculitis and elevation of blood laboratory markers by concomitant bacterial infection. Therefore determination of novel marker of bacterial infection CD64in in CSF seems to be promising.

Methods We conducted a prospective, observational pilot study enrolling children with external ventricular drainage at surgical ward and paediatric intensive care unit. CD64in in CSF together with CSF leukocyte count, glucose, proteins and blood leukocyte count, CRP, PCT were studied at the time of suspected ventriculitis. CD64in was measured by flow cytometry (Trillium Diagnostics, LLC, Brewer, ME).

Results Ten episodes of clinically suspected ventriculitis in 6 children (male 4, female 2, median age: 9 months, range: 4–167 months) were observed during a 6-month period. Episodes were classified into those with microbiologically proven ventriculitis (5 episodes) and into those with microbiologically negative CSF (5 episodes). CD64in was significantly higher in episodes with ventriculitis in comparison to episodes without ventriculitis (Table). Other blood and CSF markers did not differentiated between groups.

Cerebrospinal fluid markers	Ventriculitis group Median (range)	No-ventriculitis group Median (range)	p Student's t-test
Neutrophil CD64 index	2.44 (1.59-5.78)	1.09 (0.73-1.73)	0.0266
Leukocyte count (x10 ⁹ /L)	448 (219-1595)	140 (10-250)	0.0811
Percentage of neutrophils (%)	70 (39-85)	61 (21-89)	0.7560
Glucose (mmol/L)	2.0 (0.2-3.7)	2.8 (1.7-4.1)	0.2847
Proteins (g/L)	1.51 (0.94-3.41)	1.30 (0.23-2.0)	0.3117

Abstract 928 Figure 1 CSF markers in diagnosing bacterial ventriculitis

Conclusions CD64in might be a useful diagnostic marker of bacterial ventriculitis in children with external ventricular drainage before microbiological confirmation. A larger study is needed in the future.

929 SCREENING FOR TUBERCULOSIS WITH A TUBERCULIN SKIN TEST IN BCG VACCINATED INTERNATIONALLY ADOPTED CHILDREN

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¹T Boiy, ¹J Ramet, ¹S Verhulst, ^{1,2}M Wojciechowski. ¹University of Antwerp, Antwerp University Hospital, Edegem; ²Institute of Tropical Medicine, Antwerpen, Belgium

Background and Aims Between 1/1/2008 and 31/3/2012, 314 internationally adopted children were seen at the Institute of Tropical Medicine in Antwerp. Screening for tuberculosis is mandatory as most of these children come from countries with a high TB prevalence. Since many of these children had a BCG vaccine around birth, the interpretation of the tuberculin skin test (TST) is a matter of debate. We want to provide additional evidence supporting the statement that the interpretation of the TST is independent of previous BCG vaccination in high risk populations.

Methods TST was performed in 297/314 children. Results were reported back in 269: 154/170 children that had received BCG vaccination and 115/157 who had not been vaccinated.

Results 10/154 (6.4%) children with BCG vaccination and 6/115 (5.2%) of children without BCG vaccination had a positive TST reaction (≥ 10 mm diameter wheel). There is no significant difference between these 2 groups (chi-square $p=0.7$). 3/10 and 2/6 of these children had signs of TB on chest radiography.

Conclusions There is no significant influence of BCG vaccination on TST result in children coming from high-prevalence countries. TST should therefore not be omitted in the diagnostic work-up for TB in these children.

930 ESTIMATION OF THE PREDICTIVE VALUE OF EOSINOPHILIA FOR INTESTINAL PARASITIC INFECTION IN INTERNATIONALLY ADOPTED CHILDREN

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¹T Boiy, ²A Van Gompel, ^{1,2}M Wojciechowski. ¹University of Antwerp, Antwerp University Hospital, Edegem; ²Institute of Tropical Medicine, Antwerpen, Belgium

Background and Aims Eosinophilia may be associated with parasitic infection. To our knowledge the predictive value of eosinophilia has not been determined in internationally adopted children (IAC).

Methods Eosinophilia definition: absolute count $\geq 450/\mu\text{L}$. Eosinophil counts were available in 285/314 IAC seen between 01/01/2008 and 31/03/2012. Feces and serological examinations for Strongyloides and Schistosoma were done in all children. We calculated the positive predictive value, negative predictive value and likelihood ratios of eosinophilia $\geq 450/\mu\text{L}$ for all parasites, solely pathogenic and solely tissue invading parasites in all 285 and 197 Ethiopian children.

Results

Abstract 930 Table 1 All 285 children

	Any parasites	No parasites	Pathogenic parasites	No pathogenic parasites	Tissue invading parasites	No tissue invading parasites
Eosinophils ≥ 450	65	13	60	18	37	41
Eosinophils < 450	129	78	99	108	40	167
PPV	83%		77%		47%	
NPV	38%		52%		81%	
LR+	2.35		2.64		2.44	
LR-	0.78		0.73		0.65	

Abstract 930 Table 2 197 Ethiopian children

	Any parasites	No parasites	Pathogenic parasites	No pathogenic parasites	Tissue invading parasites	No tissue invading parasites
Eosinophils ≥ 450	59	9	54	14	33	35
Eosinophils < 450	92	37	72	57	30	99
PPV	87%		79%		49%	
NPV	29%		44%		77%	
LR+	2		2.17		2.01	
LR-	0.76		0.71		0.64	

Conclusion In this population the predictive value of eosinophilia is weak for parasitic infection.

931 INTESTINAL PARASITES IN INTERNATIONALLY ADOPTED CHILDREN IN BELGIUM

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¹T Boiy, ²M Van Esbroeck, ^{1,2}M Wojciechowski. ¹University of Antwerp, Antwerp University Hospital, Edegem; ²Institute of Tropical Medicine, Antwerpen, Belgium