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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)	0.7500
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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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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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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Background and Aims 314 internationally adopted children were seen between 01/01/2008 and 31/03/2012 at the Institute of Tropical Medicine in Antwerp (Belgium). We describe the prevalence of pathogenic intestinal parasites in this population.

Methods Retrospective analysis of patient records. Feces samples were obtained in 307/314 children. In addition, serology for *Strongyloides* and *Schistosoma* was performed.

Results Pathogenic parasites were found in 55.7% (53% in children 0–5 years, 72.1% > 5 years). When counting any parasites, 65.9% of children were found positive (61.4% for 0–5 years, 93% for >5 years).

37.5% of children with positive samples had ≥ 3 parasites. Analysis by age in children from the 4 most represented countries (n=285) is shown in table.

Abstract 931 Table 1 Percentage of children with parasites

	Ethiopia		China		Kazakhstan		India	
	0–5yr (n=180)	>5yr (n=36)	0–5yr (n=28)	>5yr (n=3)	0–5yr (n=21)	>5yr (n=1)	0–5yr (n=13)	>5yr (n=3)
<i>Giardia lamblia</i>	43.9%	52.8%	3.6%	33.3%	4.8%	0%	61.5%	0%
<i>Dientamoeba fragilis</i>	1.7%	2.8%	0%	0%	14.2%	100%	7.7%	0%
<i>Hymenolepis nana</i>	13.9%	25%	0%	0%	0%	0%	38.5%	66.7%
<i>Ankylostoma</i>	5.6%	16.7%	0%	0%	0%	0%	0%	0%
<i>Strongyloides</i>	21.1%	16.7%	3.6%	0%	9.5%	0%	23.1%	66.7%
<i>Schistosoma</i>	2.8%	11.1%	0%	0%	0%	0%	0%	0%
<i>Ascaris</i>	2.2%	0%	0%	0%	4.8%	0%	0%	0%
<i>Trichuris trichuria</i>	6.1%	19.4%	0%	0%	0%	0%	0%	0%

Conclusion There is a high prevalence of pathogenic intestinal parasites in IAC: 53% in children 0–5 years and 72.1% in children >5 years.

932 COMPARISON OF C- REACTIVE PROTEIN WITH LEUKOCYTES AND ESR FOR DIFFERENTIATION BETWEEN BACTERIAL AND VIRAL INFECTIONS

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Background There are several studies that show the usefulness of inflammatory markers for distinguishing between viral and bacterial infection at children.

Aim of the study To evaluate the usefulness of leukocytes, C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) as markers for differentiation of bacterial infection versus viral infections in children.

Methods Prospective study which evaluated 1482 patients divided into two groups: 1) group A with 777 patients having viral infections and 2) group B with bacterial infections comprised of 705 patients.

Results Mean values for leukocytes were significantly different ($p < 0.05$) for viral infection $10633 \pm 4896/\text{mm}^3$ versus $11475 \pm 5562/\text{mm}^3$ for bacterial one.

Mean erythrocyte sedimentation rate (ESR) for viral infection was $17, 5 \pm 15.13$ mm/hr versus $26, 72 \pm 24, 03$ mm/hr for bacterial infections ($p < 0.05$). Mean CRP for viral infection was $8, 73 \pm 13.34$ mg/dl versus 15.46 ± 28.05 mg/dl ($p < 0.05$) for bacterial one. We analyzed the degree in which inflammatory tests may distinguish between the two groups at 24 hours. Mean values for leukocytes was for viral infection $9506 \pm 3548/\text{mm}^3$ versus $10794 \pm 8637/\text{mm}^3$ ($p < 0.05$) for bacterial one. Mean ESR for viral infection was $12, 97 \pm 11, 8$ mm/hr versus $28, 44 \pm 21$ mm/hr for bacterial infections ($p < 0.05$).

Conclusion This study suggests that CRP, ESR and leucocytes are good markers for differentiation between bacterial versus viral infections.

933 CLINICAL FINDINGS AND LONG-TERM OUTCOME IN INFANTS BORN TO MOTHERS WITH PREEXISTING IMMUNITY TO CYTOMEGALOVIRUS

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Background and Aims Cytomegalovirus (CMV) is the most common viral cause of congenital infection. Preexisting maternal immunity strongly reduce CMV transmission. To characterize newborn findings and long-term outcome in infants born to mothers with non-primary CMV infection.

Methods Prospective study of infants with congenital CMV infection born between 2005 and 2010. Clinical and neuroimaging findings at birth were recorded. Infants were enrolled in a long-term follow-up program including clinical, ophthalmological, audiological and neurodevelopmental examinations.

Results Of the 37 infants with congenital CMV infection identified during the study period, 31/37 (84%) were born to mothers with primary CMV infections and 6/37 (16%) were born to mothers with confirmed non-primary CMV infections in pregnancy. Three of 6 infants born to mothers with preexisting immunity had symptoms/signs at birth: microcephaly (3), petechiae (2), thrombocytopenia (2), hepatosplenomegaly (2), jaundice (1), chorioretinitis (1). These infants showed abnormal auditory brainstem evoked response at first evaluation and abnormal neuroimaging findings. At follow-up 2/3 infants developed severe neurological sequelae (cerebral palsy and epilepsy in 1 case), and 1/3 showed delayed psychomotor development requiring rehabilitation; 3/3 infants had bilateral sensorineural hearing loss. Symptomatic infants were treated with antiviral drugs. The remaining 3/6 infants were asymptomatic at birth and showed a good long-term neurologic outcome.

Conclusions Clinical findings and long-term outcome in infants born to mothers with preexisting CMV immunity are widely variable and may be severe. The presence of symptoms/signs consistent with CMV congenital infection should be closely evaluated even in infants born to mothers with CMV-IgG positivity prior to conception.

934 PREVALENCE AND RISK FACTORS OF PAEDIATRIC ROTAVIRUS GASTROENTERITIS IN TUNISIA

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Background and Aims Group A rotaviruses are a major cause of severe acute gastroenteritis (AGE) in children under 5 years of age worldwide. The purpose of this study was to estimate the proportion of rotavirus gastroenteritis and identify its determinants among children admitted to Tunisian hospitals.

Methods We set up active rotavirus hospitalization surveillance in 10 Tunisian cities. From May 2009 through October 2010, we enrolled 550 children < 5 years of age who were hospitalized with a