

**Conclusion** This multi-layered risk evaluation should aid the future management of children attending the PED being investigated for SBI.

**1579** **PROCALCITONIN IN PEDIATRIC EMERGENCY DEPARTMENTS FOR THE DIAGNOSIS OF INVASIVE INFECTIONS**

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<sup>1</sup>C Zavarache, <sup>1,2</sup>O Falup-Pecurariu. <sup>1</sup>Department of Pediatrics, University Children's Hospital; <sup>2</sup>Department of Pediatrics, Faculty of Medicine, Transilvania University, Brasov, Romania

**Background** Procalcitonin is used in pediatric emergency departments for the early diagnosis of invasive bacterial infections, especially for febrile children.

**Aim of the Study** To evaluate the usefulness of a rapid semiquantitative test of procalcitonin for the diagnoses of invasive diseases at children.

**Methods** We have prospectively evaluated 25 patients divided into two groups: 1) group A with 6 patients having viral infections and 2) group B with bacterial infections comprised of 19 patients. For this group we had a score made of leucocytes over 16000/mm<sup>3</sup>, granulocytes over 12000/mm<sup>3</sup>, erythrocyte sedimentation rate (ESR) > 50 mm/h and C reactive protein (CRP) > 2.4 mg/dl, procalcitonin (CPT) >0.5ng/ml.

**Results** The analysis of ROC curves shows the degree in which inflammatory tests may distinguish between the two groups. This suggests that the quality of separation between the two groups was 0.86 for CPT, 0.85 for CRP, 0.67 for leucocytes, 0.62 for granulocytes and 0.82 for ESR (p<0.001).

**Conclusion** Procalcitonin has a higher specificity and sensitivity compared to the other acute phase reactants (leucocyte number, neutrophil number, ESR and CRP respectively). Procalcitonin may be considered in the emergency department as a valuable diagnostic tool in order to distinguish between viral and bacterial infections at children.

**1580** **LUMBAR PUNCTURE(LP) IN INFANTS AND CHILDREN WITH SUSPECTED MENINGITIS-DIAGNOSTIC YIELD OVER 15 YEARS**

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Z Barsoum. Paediatrics, Mercy University Hospital, Cork, Ireland

**Background** Bacterial meningitis is a serious disease that leads to much anxiety among the medical profession and parents.LP has long been a key tool for the diagnosis of meningitis.

**Objectives** To determine the diagnostic yield from LP over 15 years in Mid Western region of Ireland.

**Methods** A retrospective cohort analysis of laboratory data of all lumbar punctures performed from July 1996 to December 2010 in Paediatric department Mid Western Regional Hospital and maternity Hospital-Limerick-Ireland.

**Results** 1487 LPs were performed from July 1996 to December 2010.646 samples were obtained from July 1996 to December 2000 and 463 samples obtained from January 2001 to December 2005. 378 LPs were performed from 2006 to 2010.967 patients (65%) were 2 years or younger.18/1487(1.2%) patients had bacterial meningitis from 2001 to 2010, 15/18 (83%) were infants. CSF leucocytosis was noted in 17/18 patients(94%). Nisseria meningitidis B and Strypt. Pneumoniae were isolated in 38% &27% of cases respectively. Serum PCR was positive in 77% of cases. CSF PCR was positive in 100% of cases. Both CSF and blood culture were positive in 44% of cases.

**Conclusion** The incidence of bacterial meningitis is decreasing due to effective vaccination(18/1487 patients (1.2%),83% infants. The

role of LP in the diagnosis of meningitis is crucial. Nisseria meningitidis type B is the leading cause of bacterial meningitis over the last decade. CSF leucocytes are better indicators of disease than white blood cells.CSF PCR testing is more sensitive than serum PCR in the diagnosis of disease and should be requested in all cases with suspected meningitis.

**1581** **ASSOCIATION OF TACHYCARDIA WITH SERIOUS BACTERIAL INFECTION IN YOUNG CHILDREN**

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J Abbasi, IF Thopte. Department of Paediatrics, York District Hospital, York, UK

**Background and Aim** Diagnosis of a serious bacterial infection (SBI) in young children can be challenging. Clinical features at presentation are used to guide investigation and management. We aimed to determine whether tachycardia is associated with a higher risk of SBI.

**Methods** Prospective cohort study of children < 6 years old referred to a children's acute assessment unit with documented or reported temperature (July 2011 - February 2012). We examined the association between maximum heart rate during admission (Heart rate: ≥90<sup>th</sup> percentile for age corrected for temperature) and confirmed SBI (defined as per NICE guidelines).

**Results** 120 children participated. 37 children were tachycardic. 21 children had a confirmed SBI.

**Abstract 1581 Table 1** Sensitivity/specificity data

	Disease +ve	Disease -ve	Total	
Test positive	14	23	37	Sensitivity 0.66
Test negative	7	76	83	Specificity 0.79
Positive predictive value	0.37			
Negative predictive value		0.95		

**Conclusions** In this cohort of young children referred to an acute assessment unit with fever, the presence of tachycardia did not predict reliably SBI, but absence of tachycardia excluded SBI in 95% of children.

**1582** **OUR EXPERIENCE IN FUNCTIONAL ENDOSCOPIC SURGERY OF PARANASAL SINUSES IN CHILDREN**

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M Maniuc, S Diacova, L Danilov, P Ababii. *Otorhinolaryngology, Pediatric Clinic, SMPPhU, Chisinau, Moldova*

**Background** Functional endoscopic paranasal sinuses surgery actually serves as a method of election in surgical treatment of pediatric sinusitis.

**The Aim** of our research was to analyze some results of different types of functional endoscopic sinus surgery in children.

**Subjects** In study were included 420 of children (275 boys and 145 girls) of age between 7 and 14 years old with chronic and recurrent paranasal sinusitis.

**Methods** We analyzed duration of hospitalization and the percentage of complete functional recovery in 3 groups of patients: I group (84 children) received the standard method, II group (131 children) - the minim invasive method, III group (250 children) - minim invasive method in a proper modification, which provides partial vertical resection of the hamulus and the limited resection of anatomical structures of the osteomeatal complex. Before surgery nasal endoscopy, computer tomography of paranasal sinuses, acoustic rhinometry, the respiratory function of nose, olfaction function, motor activity of the transitory epithelium were studied.