

**Aim** To assess whether ADHD symptoms and relational problems are associated with changes in entorhinal cortical thickness in very low birth weight (VLBW) adolescents.

**Design/methods** Fifty VLBW (birth weight  $\leq 1500$  g) and 57 term control adolescents were assessed at 14–15 years of age with: ADHD Rating Scale IV (mother report), Strengths and Difficulties Questionnaire (SDQ mother report), Child Behaviour Check List (CBCL mother report) and Autism Spectrum Screening Questionnaire (ASSQ). Entorhinal cortical thickness (mm) was obtained using an automated MRI segmentation technique (Freesurfer). Associations were analysed by linear regression, adjusted for age, gender and socioeconomic status, and corrected for multiple comparisons (Benjamini-Hochberg procedure).

**Results** VLBW adolescents had higher ADHD and ASSQ scores than controls. On MRI, they had thinner entorhinal cortex compared to controls. Thinner entorhinal cortex was associated with higher ASSQ scores (Left:  $B = -0.946$  (-1.517 to -0.374),  $p = 0.002$ ; Right:  $B = -0.759$  (-1.308 to -0.210),  $p = 0.008$ ), and higher SDQ Peer Problems Scale scores (Right:  $B = -0.254$  (-0.459 to -0.050),  $p = 0.016$ ).

**Conclusion** Relational problems were associated with entorhinal cortical thinning in adolescents born preterm with VLBW, while associations were not found for ADHD symptoms. The different association in the two symptom groups with the entorhinal cortex might help to identify deviant neural structures and their relation to specific mental disorders.

#### PO-0005 CEREBELLUM, THALAMUS AND CEREBRAL CORTEX IN VLBW ADOLESCENTS' MENTAL HEALTH

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**Background** Children born preterm present a higher risk of psychiatric disorders during adolescence.

**Aim** To assess whether psychiatric symptoms are associated with changes in cortical thickness and volumes of thalamus and cerebellum in very low birth weight (VLBW) adolescents.

**Design/methods** Fifty VLBW (birth weight  $\leq 1500$  g) and 57 term control adolescents were assessed at 14–15 years of age with: Schedule for Affective Disorders and Schizophrenia for School-Age Children, Strengths and Difficulties Questionnaire (SDQ Mother Report), Autism Spectrum Screening Questionnaire (ASSQ), and Children's Global Assessment Scale (CGAS). Cortical thickness (mm) and volumes of thalamus and cerebellum (ml) were obtained using an automated MRI segmentation technique (Freesurfer). Associations were analysed by linear and ordinal logistic regression, adjusted for age, gender and total intracranial volume, and corrected for multiple comparisons (Benjamini-Hochberg).

**Results** VLBW adolescents had more psychiatric symptoms and diagnoses than controls. On MRI, they had several areas with thinner cortex, including the entorhinal cortex, and areas of thicker cortex, including the insula, compared to controls. Higher SDQ Emotional symptoms scores were associated with thicker insular cortex (Left:  $B = 0.418$  (0.192 to 0.644),  $p = 0.001$ ; Right:  $B = 0.243$  (0.061 to 0.426),  $p = 0.010$ ). Smaller cerebellar WM volumes were associated with higher SDQ Hyperactivity scores (Left:  $B = -0.638$  (-1.101 to -0.176),  $p =$

0.008; Right:  $B = -0.551$  (-0.966 to -0.137),  $p = 0.010$ ) and lower CGAS scores (Left:  $B = 4.653$  (2.182 to 7.123),  $p < 0.001$ ; Right:  $B = 4.255$  (2.073 to 6.437),  $p < 0.001$ ).

**Conclusion** Our results indicate that psychiatric symptoms in VLBW adolescents may be related to structural brain anomalies in cerebellar white matter and insular cortex.

#### PO-0006 WITHDRAWN

#### PO-0007 KNOWLEDGE AND ATTITUDE OF ADOLESCENTS TOWARDS HIV/AIDS-A CROSS-SECTIONAL STUDY

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**Introduction** Adolescents form a sizeable portion of the Indian population. In India, AIDS prevention and control efforts remained largely concentrated on groups already practising high-risk behaviour (like CSWs, iv drug abusers, etc.). Thus other potential groups like older school children, adolescents and younger adults, who because of their vulnerability deserve simultaneous attention, continue to remain a low priority.

**Methods** The present study was carried out to assess the level of awareness among school and college going students between the ages of 14–19 years about HIV/AIDS in Assam, India. 500 adolescents were given a pretested questionnaire and requested to fill it up and return within half an hour. The data was analysed manually using tally mark method and also subjected to Chi Square test of independent analysis and proportion test wherever needed.

**Results** The main source of HIV/AIDS awareness was media with very little information obtained from parents and teachers, representing that matters pertaining to sex, sexuality and reproduction still continue to be a taboo in our society. Misbeliefs on the modes of transmission of the disease like through handshake, kissing, use of fomites was close to 30%.

There is also a minor discrepancy between knowledge and attitude. Though majority of the study population had a good knowledge of HIV/AIDS, a substantial portion (20–30%) demonstrated negative attitude towards HIV/AIDS victim.

**Conclusion** A more appropriate programme based on behavioural science is desirable to lessen discrepancies between knowledge and desirable attitude along with Implementation of HIV/AIDS awareness programme in schools, colleges and community.

#### PO-0008 PULMONARY TUBERCULOSIS IN A 4 MONTH OLD WITH NO RESPIRATORY SYMPTOMS

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**Background** Fever of unknown (FUO) origin often presents a unique diagnostic challenge to the paediatrician. We present a unique case of a 4 month old boy with fever for 1 month, who after extensive work up was diagnosed with pulmonary tuberculosis and Severe Combined Immunodeficiency (SCID).

**Case Report** Our case is a 4 month old, Sudanese boy, residing in Qatar, who presented to our hospital with fever for two weeks. He remained febrile in the hospital for two weeks,

despite receiving Intravenous antibiotics for presumed partially treated meningitis. He also received IVIG for the suspicion of atypical Kawasaki. Computerised tomography of the head and abdomen and bone marrow studies were also inconclusive. The mother subsequently revealed that a previous child had died during infancy with prolonged fever and no specific diagnosis. This alerted the treating physicians to the possibility of immunodeficiency. Our patient had received BCG vaccine at birth without any complications, and three gastric aspirate samples were negative for tuberculosis. A broncho-alveolar lavage was performed, despite the absence of any respiratory symptoms, to exclude any unusual organisms causing prolonged fever. The broncho-alveolar lavage revealed mycobacterium tuberculosis which was resistant to Isoniazid and the patient was started on appropriate anti-Tuberculous medications. The total immunoglobulin counts and Flow cytometry were suggestive of SCID.

**Conclusion** Pulmonary Tuberculosis should be considered as a differential diagnosis of FUO, especially in infants with suspected or proven SCID. Attaining a good family history is crucial in early diagnosis of SCID and hence possibly in saving lives.

**PO-0009 INCREASED PNEUMOCOCCUS RESISTANCE TO ANTIBIOTICS AND DIFFICULTIES REGARDING THERAPEUTIC OPTIONS**

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**Background** During childhood pneumococcus (*S.pneumoniae*) is identified not only in nasopharynx (carriers), but also as etiological agent in conjunctivitis, respiratory airways infections, meningitis etc. Choosing the optimal therapy is difficult due to: prolonged time necessary to antibiotic sensitivity test (AST) achievement, difficulty to perform it and pneumococcus strains growing resistance. In Romania vaccination against *S.pneumoniae* is not offered in routine immunisation program.

**Aims** 1. To analyse resistance spectrum for *S.pneumoniae* strains; 2. Establishing empirical therapeutic decisions according to pneumococcus resistance profile in our county.

**Methods** During October 2011–January 2014, there were performed AST for *S.pneumoniae* using Vitek AST-P576 cards. Samples origin 10 nasal secretions, 21 conjunctival secretions, 12 ear samples, 4 hemocultures, 1 cerebrospinal fluid sample, 1 urine culture. Correlated with minimal inhibitory concentration to penicillin, strains were divided into: sensitive, intermediate, resistant (penicillin resistant pneumococcus-PRP). Authors took also into consideration for AST: Amoxicillin (AMX), Cefotaxime (CTX), Ceftriaxone (CRO), Eritromicine (E), Levofloxacin (L), Vancomycin (VA), Trimethoprim-Sulfamethoxazole (SXT).

**Results** Among 51 validated AST, authors noticed: 58.8% Penicillin resistance (30 PRP strains); 43.7% AMX resistance; 38 E resistant strains (82.6%); 74.5% SXT resistance; for CRO resistance reached 33.3%; 21.5% CTX resistance. All strains were sensitive for L, VA.

**Conclusions** 1. Authors observed increased resistance to penicillin, E and STX in our county; 2. Therapeutic options are limited in *S.pneumoniae* infection; 3. According to resistance pattern, authors restrict use of macrolides and STX in otitis media (most frequent etiological agent is *S.pneumoniae*); 4. In severe infections, therapeutic choices are CTX, CRO, VA; 5. Implementation of educational measures is important in order to avoid antibiotic overuse.

**PO-0010 THE PHYSICIANS APPROACH TO COMMUNITY-ACQUIRED PNEUMONIA IN CHILDHOOD**

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**Background and aims** Diagnosis and treatment guidelines for community-acquired pneumonia (CAP) are prepared to avoid differences for the diagnosis and management of CAP between physicians. We investigated the approaches of physicians to diagnosis, laboratory findings, treatment and the compatibility with guidelines for CAP.

**Method** A total of 322 doctors were interviewed face to face and a 12 item-questionnaire including diagnosis, investigation, treatment criteria and drug choices was filled by the physician.

**Results** Contrarily to the guidelines 6.9% of physicians preferred auscultation and chest radiography (CXR) and did not use the symptoms for diagnosis. Only 11.8% preferred symptoms and diagnostic investigations. 58.8% did not use CXR, CBC and CRP, 24.5% did not use CXR, CBC, CRP and ERS and 4.9% of them did not prefer any investigations. Also routine CXR to confirm CAP in outpatient setting children is not recommended by guidelines physicians preferred CXR at high percentage. Physicians did not preferred Amoksisilin for mild CAP between 3 months - 2 years old children, 55% preferred parenteral treatment with ampicillin/sulbactam. Parenteral Seftriakson was preferred for hospitalised patients (>5 years) with severe pneumonia. 49.7% of physicians preferred ten day duration of therapy, 17.1% stopped treatment after disappearance of symptoms and auscultation findings, 13.7% completed the treatment after improvement of CXR.

**Conclusion** Physicians applied different approaches to the diagnosis and treatment of CAP in infants and children. According to our findings, we suggested that physicians should be educated about approaches for treatment of CAP according to guidelines.

**PO-0011 LENGTH OF STAY IN INFANTS AND CHILDREN HOSPITALISED WITH ACUTE BRONCHIOLITIS: RSV VERSUS NON-RSV**

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**Background** Respiratory Syncytial Virus (RSV) is a common lower respiratory tract viral infection. RSV and a wide variety of other respiratory viruses are common triggers for bronchiolitis.

**Aim** To determine the length of stay in infants with acute RSV bronchiolitis vs. Non-RSV.

**Materials and methods** A retrospective study was conducted at Hamad Medical Corporation (HMC). Infants and children ages 0 to 18 months hospitalised with acute bronchiolitis from October 2010 to March 2013 were included. The data collected: age at diagnosis, sex, direct fluorescent antibody (DFA) and length of stay.

**Results** The study included 838 infants, mean age 3.6(±3.5) months, and boys constituted 60%. DFA was conducted on 770 infant, where 352 Were RSV positive (45.7%), 142 were RSV negative (18.4%) and other non-RSV viruses (Adenovirus, Rhinovirus, InfluenzaVirus, Parainfluenzavirus, and Bocavirus)276 (35.8%). The mean length of stay for RSV-positive was 8.03 days, 95% C. I. (7.26–8.79), and 6.94 days, 95% C. I. (5.89–