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111. Paediatric respiratory infection: signs, symptoms and sequelae

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Effects of respiratory viral infections on the lower respiratory tract of children, especially asthmatic children

Asako Fujitsuka¹, Mika Arakawa², Kazuko Sugai³, Masahiro Noda⁴, Hirokazu Kimura⁵. ¹Children's Medical Center, Yokohama City University Medical Center, Yokohama, Kanagawa, Japan; ²Public Health, Tochigi Prefectural Institute, Utsunomiya, Tochigi, Japan; ³Pediatrics, National Hospital Organization Yokohama Medical Center, Yokohama, Kanagawa, Japan; ⁴Virology III, National Institute of Infectious Diseases, Musashimurayama, Tokyo, Japan; ⁵Infectious Disease Surveillance Center, National Institute of Infectious Diseases, Musashimurayama, Tokyo, Japan

Aim: Recent studies strongly suggest that some respiratory viruses are associated with exacerbation of asthma. We examined their characteristics and their effects on children with acute lower respiratory symptoms and asthma.

Method: We examined some respiratory viruses in nasopharyngeal swabs using the polymerase chain reaction (PCR) assay or RT-PCR and analyzed their clinical data obtained from 107 children (M/F 70/37, mean age 25.7±27.9 months) with lower respiratory symptoms who were treated in our hospitals between January and November 2010. From clinical records, we prospectively investigated the clinical symptoms of the children.

Results: RSV was detected in 27 samples, HRV in 31, HRV and RSV together in 4, HRV and HBoV together in 2, EV in 7, PIV in 5, HBoV in 2, and AdV in 2, but no virus was detected in 29. In the RSV group, asthmatic children numbered 10 and non-asthmatic children, 17, (of whom 11 were inpatients and 6, outpatients). The mean age of the inpatients (9.3±8.2 months) was significantly less than that of the outpatients (26.2±14.2 months) (p=0.003). In the HRV group, the frequency of severe respiratory symptoms was significantly higher in asthmatics than in non-asthmatics (p=0.04). The mean age of the asthmatic inpatients tends to be higher than that of the asthmatic outpatients.

Conclusion: Younger children are more susceptible than older children to severe respiratory symptoms in RSV infections, while, asthmatic school-age children tend to have severe asthmatic symptoms with HRV infections. These findings suggest that asthma exacerbation in school-age children may be associated with HRV infections.

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CARESS: The Canadian registry of palivizumab (2005-2010)

Ian Mitchell¹, Bosco Paes², Abby Li³, Krista Lancot³. ¹Paediatrics, University of Calgary, Calgary, AB, Canada; ²Paediatrics, McMaster University, Hamilton, ON, Canada; ³MORE, Sunnybrook Health Sciences Centre, Toronto, ON, Canada

Objective: To evaluate the current management of children at high-risk of RSV infection who received palivizumab prophylaxis in tertiary care centers and community settings using a Canadian Registry Database.

Methods: A prospective, observational, registry of infants who received ≥1 dose of palivizumab during the 2005-2010 RSV seasons across 29 sites. Data on palivizumab utilization and compliance, and outcomes related to a respiratory infection were collected monthly until the full course of palivizumab was completed.

Results: 7699 infants were enrolled, with an average age of 5.4±6.0 months. Participants were typically male (56.4%), Caucasians (71.5%), with an average gestational age (GA) of 32.2 (SD 6.0) completed weeks. 5237 (68.0%) infants received palivizumab for prematurity (35 completed weeks GA) only, 766 (9.9%) for congenital heart disease, 646 (8.4%) for chronic lung disease and 1050 (13.6%) for other risk factors (e.g., CNS disorders, airway anomalies and cystic fibrosis). Patients received an average of 3.9 (SD 1.6) injections, with 30,040 doses given overall. 5.5% of patients withdrew from the study. No direct, drug related serious adverse events were identified. 460 infants had a total of 541 hospitalizations

for a spectrum of respiratory tract illnesses resulting in a hospitalization rate of 6.0%. The overall RSV positive hospitalization rate was 1.47% with no mortality. Living with siblings was significantly correlated with a shorter time to first RSV-positive hospitalization (B=0.615, df=1, p=0.046).

Conclusions: The RSV hospitalization rate observed in the 2005-2010 RSV seasons was similar to that found in several published reports of infants receiving prophylaxis (range 1.3%-5.3%).

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Increasing immunosuppression despite high load of respiratory viruses: Fludarabine as rescue treatment in alloreactive lung disease

Bart Rottier¹, Martine Raphael², Jan Jaap Boelens². ¹Beatrix Children's Hospital, University Medical Center Groningen, Groningen, Netherlands; ²Wilhelmina Children's Hospital, University Medical Center Utrecht, Utrecht, Netherlands

Background: Allo immune lung syndromes (alloLS) as Bronchiolitis obliterans syndrome and ideopathic pulmonary syndrome are life threatening complications after allogeneic hematopoietic stem cell transplantation (HSCT) or lungtransplantation (LTX; rejection). Respiratory viral infections may trigger these alloLS. If conventional treatment with corticosteroids is not effective, 2nd line therapy may be needed.

Aim: To describe safety and efficacy of the T-cell depleting agent fludarabine to treat allo immuneLS in the presence of viral infections

Methods: We describe 5 patients (4 HSCT, 1 LTX) with steroid refractory alloLS who were therefore treated with fludarabine 30mg/m² on a 3 weekly basis. Viral persistence of respiratory viruses was monitored by quantitative PCR before and during treatment.

Results: The five patients all initially had good engraftment, but developed respiratory complications. 4 patients were positive in BAL and/or nasopharyngeal aspirate with cycle threshold (CT values <30 for: rhinovirus (2), parainfluenza and RSV (1) and adenovirus (1)). 4/5 patients had initial response after mean 2.4 (range 1-4) courses. The LTX patient improved clinically as well as for FEV1 for 2 months and then had a relapse with progression of the alloLS. One patient died from aspergillus after 2 months. 3 patients had sustained response. Viral load (expressed in CT values) remained high in all patients, without occurrence of systemic disease.

Conclusions: Fludarabine is feasible and an effective 2nd line treatment of steroid refractory allo immune lung syndromes, without an increase in viral load. This empirical treatment now deserves a controlled study.

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Lung function of preschoolers with parapneumonic effusions complicating community acquired pneumonia

Vasiliki Avramidou, Elpis Hatziaorou, Fotis Kirvassilis, Charalambos Antachopoulos, John Tsanakas. *Paediatric Pulmonology Unit, 3rd Paediatric Dept., Aristotle University of Thessaloniki, Hippokraton Hospital, Thessaloniki, Greece*

Background: Parapneumonic effusions as a complication of community acquired pneumonia (CAP) in children show an increasing prevalence.

Aim: To monitor expiratory Interrupter Resistance (Rint), Lung Clearance Index (LCI) and chest X-Ray among preschoolers with parapneumonic effusions.

Methods: We evaluated children hospitalized with pleural effusion as a complication of CAP. Expiratory interrupter resistance (Rint) and Lung Clearance Index (LCI) were measured on the day of discharge and six months later.

Results: 13 preschoolers, aged 3.58±1.21 years were studied. In 11/13 (84.6%) Streptococcus Pneumonia was isolated. 84.6% had chest drainage, intrathoracic urokinase was administered in 69.2% of the children. Two children developed broncho-pleural fistula and one pericarditis. Lung decortication was documented in 1 child. 38.4% of the patients had abnormal chest X-ray, 6 months later. Children with pleural effusions had significantly higher Rint on day of discharge (1.12±0.34 vs 0.78±0.20 kPa L⁻¹ second, p<0.001). Six months later Rint was reduced to normal levels (0.77±0.31 kPa L⁻¹ second, p <0.001). Children with pleural effusion had significantly higher LCI compared to controls (mean difference [95% CI] 2.8 [1.9, 3.8], p<0.001). Six months later, 46.15% of the children had still significantly high LCI, compared to controls [95% CI] 2.2 [1.1, 3.3], p<0.01).

Conclusions: One third of preschoolers with pleural effusions had an abnormal chest X-Ray, while half of the children had significantly high LCI, six months later. LCI is a sensitive marker that detects abnormal lung function and could be used to monitor preschoolers with parapneumonic effusions complicating CAP.

P1151

Recurrent respiratory tract infections in the preschoolers and IgG3 deficiency

Ioanna Vasilopoulou¹, Ageliki Karatza¹, Fotini Paliogianni², Maria Trigka¹. ¹Paed. Allergy Unit, Dept. of Paediatrics, ²Dept. of Microbiology, Patras University General Hospital, Patras, Greece

Introduction: Recurrent respiratory infections (RRI) are a common cause of morbidity during childhood.

Materials and methods: We report four cases of otherwise healthy preschool children who were referred to our paediatric allergy clinic for lower RRI with wheezing, crackles, cough and rhinitis, mostly during the autumn and winter

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months, since they started attending kindergarten. They were being treated with antibiotics, inhaled beta-2 agonists and corticosteroids for the exacerbations. They were on prophylactic therapy with fluticasone 200µg/day and montelukast 4mg/day, with no improvement. There was no history of atopy and the skin prick tests to common aeroallergens were negative. Chest-x-ray and sweat test were normal. All patients underwent an immunologic screening that included CBC, ESR, CRP, serum concentration of IgG, IgA, IgM, IgE, IgG1, IgG2, IgG3 and IgG4. The major Ig isotypes and the IgG subclasses were quantified by rate nephelometry. The laboratory investigation results were all within normal limits except of IgG3 which was in all patients below the 5th centile, based on published Greek normative data. IgG3 levels were: *patient 1*, aged 3.5: 10.5mg/dl (normal values 17-90), *patient 2*, aged 4.5: 20.7mg/dl (normal values 24-85), *patient 3*, aged 5: 13.6mg/dl (normal values 24-85), *patient 4*, aged 6: 14mg/dl (normal values 22-100).

Conclusion: IgG3 deficiency should not be ignored as a possible cause of RRI. Although it may be a transient phenomenon, it is prudent to follow these patients as some might evolve into common variable immunodeficiency. Moreover the use of increased doses of inhaled or systemic corticosteroids may delay the clearance of the virus from the respiratory tract.

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In Bulgaria about 67% of all patients newly diagnosed children with this diagnosis. The purpose of this study was to determine the diagnostic capabilities of the T SPOT TB in this form of TB disease.

In a period of one year were examined in 50 children ages 0-12 years treated in ower hospital with tuberculosis of lung lymph nodes. The diagnosis was set based on history, clinical, microbiological and radiological check you. TST and T SPOT TB test were performed simultaneously in the studied children.

It was investigated the relationship between immunological samples TST and T SPOT TB compared contacted hectic age, BCG status and sputum smear microscopy.

If no children with TST negative samples, 44% were normergichni reactions to 15 mm. 56% were hiperergiya > 15 mm.

In a study with T SPOT TB 28% gave negative results and 72% positive. Most children 44% responded to both applied antigen, 20% of the CFP 10 and only 8% of ESAT 6.

As a result of the study made the following conclusions: 1. T SPOT TB has its place in the diagnosis of tuberculosis especially in countries with compulsory BCG vaccination Bulgaria 2. T SPOT TB has a better diagnostic capabilities in major age groups 3. It was a good correlation between the two tests - the percentage of correlation 80%. 4. The sensitivity of the T SPOT TB was 70% and 90% in TST

P1155

Connective tissue disorders as the factor that changes clinical course of community-acquired pneumonia in children

Zoia Nesterenko¹, Olena Ivanina². ¹Department of Pediatrics, Faculty of Postgraduate Studies, Lugansk State Medical University, Lugansk, Ukraine;

²Outpatient Department, Lugansk Municipal Children's Hospital No.2, Lugansk, Ukraine

Aim: To study peculiarities of clinical course of community-acquired pneumonia (CAP) in children with connective tissue disorders (CTD).

Methods: 64 children with CAP aged 1-18 were studied during one year. Patients were divided for analysis into two age groups: children aged 1-3 (group A, n = 16), and aged 4-18 (group B, n = 48). All patients had manifestations of CTD. CAP was clinically and radiographically diagnosed with detection of serum antibodies (IgG and IgM) against intracellular pathogens measured by enzyme-linked immunosorbent assay (ELISA).

Results: All patients had CAP caused by atypical pathogens with indistinct clinical manifestations and symptoms. Recurrent course of CAP was in 54 (84,4%) patients. CAP caused by Chlamydomphilla pneumonia (Cp) was more frequent in group A – in 15 (93,7% of the group) patients. CAP caused by Mycoplasma pneumonia (Mp) was more frequent in group B - in 44 patients (91,6% of the group), in 6,8% - together with Cp, in 27,3% - with Cytomegalovirus. Asthma was diagnosed in 29 (45,3%) patients mainly of group B, with recurrent CAP in 10 (34,5% of patients with asthma); 62,1% of these children had pulmonary hypertension (PH). 44,4% of patients with PH had evidence of pulmonary fibrosis (PF), which led to pneumatocele (PC) in 27,7%, polyserositis (PS) in 11,1% and spontaneous pneumothorax (SP) in 3,4% of patients.

Conclusions: 1. Close relationship between CTD and CAP is revealed. 2. In children up to 3 years old Cp CAP was more frequent, in children aged 4-18 - Mp CAP. 3. More than one-third of patients with asthma had recurrent CAP. 4. Asthma in children with CAP and CTD was more severe with development of PH, PF, PS, SP.

P1156

Clinical management and outcome of childhood lung abscess (LA): A 15-year experience

Oleksander Katilov, Dmytro Dmytriv, Oleksander Mazulov. *Pulmonology, Vinnitsa National Medical University, Vinnitsa, Ukraine*

In order to evaluate the clinical manifestations, management and outcome of childhood LA, a retrospective chart review of 35 pediatric with LA from September 1995 to September 2010 was conducted. Among the 37 patients (20 males and 15 females), 51, 4% (18/37) were primary lung abscess and 49,6% (17/35) had underlying chronic diseases (secondary lung abscess). The predisposing factors of the primary group (n = 18) included 16 cases of respiratory tract infection and 2 with laceration wound. The underlying diseases in the secondary group (n = 17) included 11 cases of hematologic disorder (64,7%), 4 of congenital heart disease, and 2 each of hyperimmunoglobulin E syndrome. 14 patients underwent diagnostic tapping, including echo-guided aspiration (11 cases) and computed tomography-guided percutaneous needle aspiration (2 case). Positive yield rate from aspiration of lung abscess was 50% (7/14). Surgical intervention was performed in 10 of the secondary group and in 1 patient from the primary group. The pathogens were identified in 17 patients (49,6%): 5 with oral flora, 4 with Staphylococcus aureus plus other pathogens, 1 with S. aureus alone, 2 with Pseudomonas aeruginosa plus Proteus mirabilis, 4 with P. aeruginosa alone, and 1 with Aspergillus. The average duration of parenteral antibiotic use was 20 days. 2 cases (5,4%) died due to poor control of the underlying diseases, and 4 of the patients (10,8%) had sequelae (3 with bronchiectasis and 1 with lung fibrosis). Early percutaneous aspiration has an important role in identification of pathogens. Oral anaerobes and S. aureus are the core pathogens in primary lung abscess and gram-negative pathogens should also be considered in secondary LA.

P1153

Development a set of reagents for real-time PCR diagnostics and surveillance of infections caused by B. pertussis, B. parapertussis and B. bronchiseptica

Maria Praded, Tatiana Selezneva, Svetlana Yatsyshina. *Federal Service for Surveillance on Consumers' Rights and Human Well-Being, Central Research Institute for Epidemiology, Moscow, Russian Federation*

Pertussis is a vaccine-preventable disease, but the goal to reduce the incidences of whooping cough by 2010 to 1 case cases per 100,000, has not been achieved in any country. Causative agent of whooping cough is *B.pertussis*, but *B.parapertussis*, cause of about 45% of clinical whooping cough cases. Cross-immunity against *B.parapertussis* is absent. Our goal was to develop a set of reagents for Real-Time PCR differential identification of *B.pertussis*, *B.parapertussis* and *B.bronchiseptica*. The complexity is that genomes of these species are very similar. To solve this problem specific primers and probes have been chosen for detection of four targets in one tube. One of the targets is pertussis toxin (ptx) gene, which presents in genomes of *B.pertussis*, *B.parapertussis* and *B.bronchiseptica*. The second one is gene unique for *Bordetella pertussis*, the third one is gene unique for *B.bronchiseptica*. Fourth target is an exogenous internal control for assessment the efficacy of all stages of PCR analysis. Analytical sensitivity of developed set of reagents is 5×10^2 genomic units/ml of the sample. 51 *Bordetella* cultures isolated from children clinical samples with whooping cough in Russia in 1967 - 2011 and 6 *Bordetella* strains from animal were tested. The specificity of *Bordetella* species identification has been proved by sequencing of pertussis toxin gene promoter region. Preliminary results on 188 clinical samples have revealed high diagnostic efficacy of developed set of reagents.

P1154

Diagnostic capabilities of the T SPOT TB in children with tuberculous bronhadentitis: University Clinic for Lung Diseases – Sofia, Bulgaria

Svetlana Velizarova. *University Clinic for Lung Diseases, Medical University, Sofia, Bulgaria*

Bronhadentitis TB is the most common form of tuberculosis disease in childhood.

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Clinical characteristics of pediatric patients affected with H1N1/2009 pandemic influenza A virus who needed hospital admittance in the western region of Guatemala

Kenneth Escobar¹, Adolfo Cuá², Fabiola Moscoso³, Mario Mejía¹. ¹*Pediatrics, Hospital Regional de Occidente, Quetzaltenango, Guatemala;* ²*School of Medicine, Universidad de San Carlos de Guatemala, Quetzaltenango, Guatemala;* ³*Central America and Panama Emergent Diseases Surveillance Program, Hospital Regional de Occidente -CDC/CAP, Quetzaltenango, Guatemala*

Introduction: A new variant of the H1N1 influenza A virus caused a pandemic from 2009 until the second semester of 2010.

Aim: To review the clinical characteristics of children who needed admission to our hospital due to a respiratory infection caused by H1N1/2009 influenza A pandemic virus.

Methods: We included in this review all pediatric patients who were admitted to our hospital due to H1N1/2009 influenza A pandemic virus infection, detected by a polymerase chain reaction test in a nasopharyngeal aspirate, sent to the CDC in the US, for accurate viral classification.

Results: We reviewed 40 clinical files. 24 were male; mean age 19 months. 47% were severe malnourished. Three symptoms were predominant in these patients: fever, cough and some degree of respiratory distress. 87.5% of these patients suffered from pneumonia, the main indication to be admitted to the pediatric ward. Hematic biometrics were normal. C reactive protein mean value of 30 mg.dl-1 in 26 cases. Only one patient received oseltamivir, but 87% (30 patients) were under antibiotics since admission. 10% required mechanical ventilation. An alveolar radiological pattern was seen in 70% of the chest X rays. Mean time hospitalization 7.5 days. The primary outcome of the study, mortality rate, was 7.5% (3 cases).

Conclusions: The mortality due to H1N1 2009 influenza A pandemic virus was low, even though most of our patients were malnourished, had pneumonia and did not receive antiviral treatment. This data correlates with data from other series in which mortality rate from this new pandemic influenza virus was lower than expected.

P1158

Outcome of H1N1 infection in hospitalised paediatric patients in a tertiary hospital

Poovathoor Alexander, Hashim Javad, Yusriya Al Rawahi, Laila Al Yazdi, Abdullah Balkhair. *Department of Child Health, Department of Infectious Diseases, Sultan Qaboos University Hospital, Muscat, Oman*

Introduction: In Oman, a total of 7040 cases tested positive for H1N1 with 31 deaths, till February 2010. We describe the clinical characteristics of children admitted to Sultan Qaboos University Hospital (SQUH) from September 2009 to February 2010.

Methods: The clinical data of all children with influenza like illness were reviewed. The diagnosis was confirmed in 38 cases by positive RT-PCR assay.

Results: A total of 243 children were admitted with influenza like symptoms, out of which 38 tested positive for H1N1. The mean age group was 4 years 1 month. The time between onset of symptoms and admission ranged from 1-14 days and the duration of admission from 1- 22 days. LFT was abnormal in 2 children. None of the confirmed cases had been vaccinated. 25 of these 38 patients had co morbidities. The most frequently reported symptom was cough and the most frequent sign was fever. Chest X ray was done for 27 of them and 14 patients had evidence of pneumonia. Twelve percent of the cases had leucocytosis and leucopenia respectively. Thirty percent, had elevated CRP, the highest being 146. One child required prolonged oxygen and needed intensive care including CPAP. No death was reported. All patients except one, were given oseltamivir, after swabs were taken for diagnosis. The duration of therapy was 5 days and no significant adverse reactions were noted. No complications, related to H1 N1 were noted in any of the patients.

Conclusion: Influenza A virus infection affected all age groups, including children less than 12 years of age. The mortality rate in the adult population was 7% in hospitalised patients in Oman (Al Lawatia et al, SQUMJ 2011;10:326-324) but no child died due to H1N1 infection at SQUH or in any hospital in Oman.

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Risk-factors of negative predictive value of cardiovascular system damage in children with recurrent respiratory tract diseases

Ketevan Barabadze¹, Ann Tsabutashvili². ¹*General Paediatric, Tbilisi State University D. Tatishvili Medical Center, Tbilisi, Georgia;* ²*General Paediatric, Tbilisi State University, Tbilisi, Georgia*

Introduction: Socio-economic problems in our country had a great influence on health degree of population. The myocardium disorders in early age have meaningfully risen all around in Georgia. The conventionally accepted risk-factors of cardiovascular system disorders: Smoking, obesity, low physical activity, poor nutrition, congenital load rate, and standard social and medical risk factors was taken into account in our study.

Aims: Revealing of prognostic risk-factors of negative predictive value in cardiovascular system damages in children with recurrent respiratory tract diseases and building up the preventive strategy.

Methods: A cross-sectional study was held. Examination involvement criteria were as follows: children's age (from 3 to 15). Pathological recurrent progressive-ness of the respiratory system pathologies (5-7 episodes within the last year). The study was carried out on the base of applications worked out by us according to American Heart Association recommendation.

Results: The results are given in Table 1.

Table 1. Results

	Experimental event chance	Odds ratio
For Cigarette smoking	1,2	1,77
For Congenital load rate	2,5	3,8
Obesity	1	1,37
Low physical activity	0,8	1,17
Poor Nutrition	2,74	4.
Abnormalities in History of Pregnancy and/or Delivery	1,9	2,7
Poor Habitat Status	1.	1,4
Presence of Streptococcal Infections	1,75	5,4

Conclusions: Study revealed the prognostic risk-factors of cardiovascular system damages in children in Georgia with respiratory tract diseases. The application applied by us in the study, can be used by pediatrics as well to reveal of children of high risk group and build up the preventive strategy.

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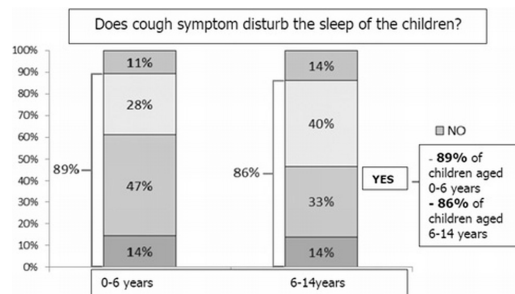
Impact of cough on quality of sleep and effect of anti-tussive treatment in children: An observational study

Alessandro Zanasi¹, Gianluca De Danieli², Luigi Lanata², Rossella Balsamo², Salvatore Cazzato³, Francesco De Blasio⁴. ¹*Pneumology Unit, University of Bologna, S.Orsola Malpighi Hospital, Bologna, Italy;* ²*Medical Department, Dompè spa, Milan, Italy;* ³*Department of Paediatrics, University of Bologna, University of Bologna, S.Orsola Malpighi Hospital, Bologna, Italy;* ⁴*Respiratory Medicine and Pulmonary Rehabilitation Section, Clinic Center, Private Hospital, Naples, Italy*

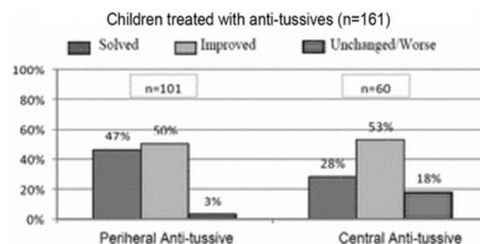
Background: Cough is one of the most frequent symptoms in children and is the most common symptom for which children are visited by primary care paediatricians.

Methods: We studied 433 children who required a paediatrician specific consultation for acute cough and analyzed quality of sleep and anti-tussive treatment.

Results: The mean age of the children was 6.1 years (DS 3.6). Cough disturbed sleep in 87.5% of children (Fig.1) and in 71% of parents.



The number of children treated with peripheral anti-tussives (levodropropizine n=101) was higher than with central anti-tussives (codeine and cloperastine n=60). Percentage of cough resolution was significantly higher with levodropropizine than with central anti-tussives (47% vs. 28% respectively, p=0.0012) (Fig 2). Percentage of no change or worsening was lower for levodropropizine vs. central drugs (3% vs. 18%, respectively).



Conclusions: Cough disturbed children and parents sleep. Both peripheral and central anti-tussives were effective in reducing cough intensity, with an advantage for levodropropizine in terms of higher cough resolution and lower unsuccessful treatment.

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P1161**Primary ciliary aplasia as a cause of recurrent respiratory infections in an infertile young man**

Mario Canciani¹, Sara Bortolato², Gioia N. Canciani³, Margherita De Santi⁴.
¹Allergology and Pulmonology Unit, Department of Paediatrics, University of Udine, Udine, Italy; ²Allergology and Pulmonology Unit, Department of Paediatrics, University of Udine, Udine, Italy; ³Norwich School of Medicine, Health Policy & Practice, University of East Anglia, Norwich, Norfolk, United Kingdom; ⁴Department of Human Pathology and Oncology, University of Siena, Siena, Italy

We present a case of primary ciliary aplasia (PCA) a rare form of primary ciliary dyskinesia, characterised by the total absence of cilia in respiratory and sperm cells.

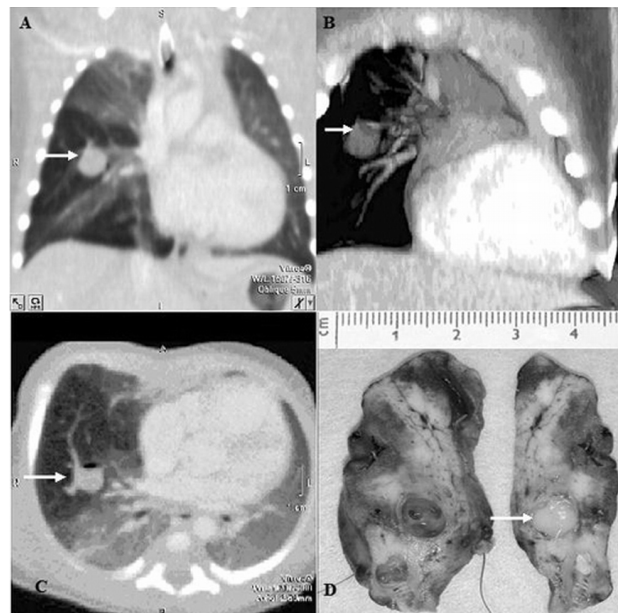
B.A. was born to healthy, first-degree related parents (first cousins). A few hours following birth, the patient developed the first of recurrent upper and lower respiratory tract infections. Cystic fibrosis, major immune deficiencies and allergic sensitization were excluded. Chest CT showed diffuse bronchiectasis of both middle lobes. Nasal and bronchial mucosa samples on transmission electron microscopy revealed total lack of cilia and basal bodies on columnar epithelial cells, despite displaying the morphological features of ciliated cells. At puberty, testicular volume and serum hormone levels were normal. Seminal fluid analysis revealed: ejaculate volume of 0.6 ml; pH 8; low sperm concentration (0.5-0.7 million of spermatozoa/ml); and asthenospermia-teratospermia (immotile spermatozoa > 75%). Ultrastructural examination showed a high prevalence of spermatozoa with normal nuclei and well structured acrosomes but a high percentage of spermatozoa (>80%) totally lacked the neck region; this region was embedded in a wide cytoplasm in the remaining 20%. No tails were detected in any samples. As the respiratory mucosa and seminal fluid analyses showed the same morphological features, the diagnosis of PCA was made. The clinical presentation at birth and the parents' consanguinity make it unlikely that these changes are the result of infection or exposure to pollutants, thus supporting the hypothesis that PCA can be an inherited disorder.

P1162**A neonate with respiratory distress and unilateral pulmonary hyperinflation**

Abdullah Yousef^{1,7}, Ella Sugo^{2,6}, Bruce Currie^{3,6}, Pamela Palasanthiran^{4,6}, Adam Jaffe^{5,6}.
¹Pediatrics, King Fahad Hospital of The University, Khobar, Saudi Arabia; ²Department of Anatomical Pathology, Sydney Children's Hospital, Sydney, Australia; ³Department of Pediatric Surgery, Sydney Children's Hospital, Sydney, Australia; ⁴Department of Immunology & Infectious Diseases, Sydney Children's Hospital, Sydney, Australia; ⁵Department of Respiratory Medicine, Sydney Children's Hospital, Sydney, Australia; ⁶School of Women's and Children's Health, University of New South Wales, Sydney, Australia; ⁷College of Medicine, University of Dammam, Dammam, Saudi Arabia

Introduction: Bronchial atresia is characterized by a mucus-filled bronchocoele in a blind-ending segmental or lobar bronchus, with hyperinflation of the obstructed segment of lung. We report a case of bronchial atresia in a neonate with Congenital Cytomegalovirus infection.

Case report: A 9-day old boy presented with history of increased work of breathing and cyanosis. Antenatal ultrasound at 22 weeks of gestation demonstrated hyper-echoic changes in the thorax and abdomen which did not progress throughout pregnancy. At presentation to hospital he was in moderate respiratory distress



and was commenced initially on CPAP but he required mechanical ventilation in the 2nd week of life. He had a normal white cell count, C-reactive protein & negative blood cultures. CMV was detected by PCR in urine and blood, and in endotracheal aspirate samples. Blood samples from newborn screen taken on day 2 of life was also positive for CMV by PCR, CMV IgM antibody was also positive. A chest CT scan was performed (Figure A, B & C). The child had a right middle lobectomy & pathology revealed a bronchocoele with an 11mm mucus plug (Figure D) in a sub-segmental bronchus of the right middle lobe. CMV inclusions with minimal surrounding inflammation were noted on microscopy of the peripheral lung. In summary, this is the first reported case of bronchial atresia occurring with cCMV infection which may give further insight into the pathogenesis of this rare condition.

P1163**A girl with extensive dissemination of thoracic echinococcosis**

Iris Groothuis¹, C.P. van de Ven², A.W.P.M. Maat³, G. Paleru⁴, J.C. de Jongste⁵.
¹Pediatrics, Sophia Children's Hospital, Rotterdam, Netherlands; ²Pediatric Surgery, Sophia Children's Hospital, Rotterdam, Netherlands; ³Thoracic Surgery, Sophia Children's Hospital, Rotterdam, Netherlands; ⁴Thoracic Surgery, Inst. National de Pneumologie "Marius Nasta", Boekarest, Romania; ⁵Departments of Pediatrics, Sophia Children's Hospital, Rotterdam, Netherlands

A 10 year old girl from Irak was routinely screened for tuberculosis after immigration. She reported chronic cough and chest pain during the past year. A cystic lesion was detected on chest X-ray, and confirmed by a chest CT which also showed some pleural nodules. There was no suspicion of malignancy, tuberculosis was excluded and Echinococcus serology was negative. Bronchoscopy showed no abnormalities, BAL cultures were negative and galactomannan was normal. Abdominal ultrasound excluded cystic lesions in the liver. She was treated with antibiotics and her symptoms disappeared. Surgery was scheduled to make a final diagnosis and because of the infection risk, with a diagnosis of infected CCAM and pleural adhesions. Before surgery we made an MRI scan which revealed a massive amount of cystic lesions, occupying a large part of her left hemithorax. We now suspected disseminated thoracic echinococcosis, and repeated serology, which was now positive. After albendazole pretreatment a left lower lobectomy and resection of a large number of cysts was performed. Retrospectively, she had experienced an episode where she had noticed a salty taste and had expectorated white matter, presumable as a sign of endobronchial rupture of an echinococcus cyst. In conclusion, we present a rare case of extensively disseminated pulmonary and thoracic echinococcosis, which might have been prevented by careful medical history taking, which could have detected cyst rupture.

P1164**Chronic nonspecific diseases of lungs (CNLD) and iodine deficiency diseases in children**

Turdikul Bobomuratov, Gulchekhra Isakova, Dilshoda Akramova, Alimardon Kuziev. *Pediatrics, Tashkent Medical Academy, Tashkent, Olmazor, Uzbekistan*

During the chronic bronchopulmonary pathology as CNLD on children on background of iodine deficiency diseases, accompanied with the chain of unfavorable event in immune system, metabolic processes which aggravate the clinical course, as well as make ill effects.

Under observation were 68 children with CNLD average age patients 8,4±0,2. Remoteness of diseases 4,71±0,4 years.

At determination of the size of the thyroid gland on US have revealed: hyperplasia of thyroid gland I-degree on 52,3% children with CNLD, on 28,5% II-degree, on 19% are normal size of the organ.

The Analysis have shown that the level of TTG in contents of serum in all patients were higher than checking group (R<0,001). The Level of free triiodothyronine (TTh) and thyroxin (T4) were lower on 77,9%, but on 22,1% examined were normal.

Also contents of cortisol on patients with severe condition were high (144±6,56 mg/ml) as compared with patients in medium condition (89,6±8,3 mg/ml).

For estimation of iodine insufficiency degree we defined the concentration of the iodine in single portion of the urine by photometrical method. On 25% examined, median concentration of the iodine in urine was found the moderate iodine insufficiency degree (20-49 Mkg/l), on 55,8% light degree (50-99 Mkg/l), but on 19% iodine concentration in urine was above 100 Mkg/l. Thus, presence of iodine deficiency diseases in children with CNLD, has a definite significance during and outcome of chronic bronchopulmonary process, which requires additional and regular introduction of iodine-containing preparation and thyroid hormone.

P1165**Local cytokine production peculiarities in nasopharyngeal (adenoid) tissue of children with chronic lymph proliferative syndrome of different etiology**

Elena Varyushina¹, Marina Drozdova², Elena Tyrnova², Andrey Simbirtsev¹.
¹Immunopharmacology, State Research Institute of Highly Pure Biopreparations, St. Petersburg, Russian Federation; ²Pediatrics, Research Institute of Ear, Nose, Throat & Speech, St. Petersburg, Russian Federation

Proinflammatory cytokines can regulate local inflammatory and immune responses

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during infections of respiratory tract. Production of IL-1 α , IL-1 β , IL-6 and IL-8 was investigated in children with chronic lymph proliferative syndrome. Biopsies of adenoid tissue were taken in 42 children 3-8 years old during adenectomy or adenotonsilectomy. Cytokines production was detected in cryostat sections using non-direct immunohistochemistry. Neutrophils were stained histochemically. Cytokine-producing cells (mainly macrophages) were counted in sections, results were expressed in units (0 no reaction – 3 high intensity) and percent of positive cases was calculated. I group of children (n=16) had Epstein-Barr virus (VEB), cytomegalovirus (CMV)-infection (past-infection, PCR+DNA VEB, CMV), II group (n=15) - streptococcal infection (ASL-0>200ME/ml), III group (n=11) - unclear etiology. We detected IL-1a, IL-6 in 25-75%, IL-1b- in 25%, IL-8 – in 75% patients from I group, but at 94-100% cases in II or III groups. Intensity of all cytokines production was the highest in II group (IL-1a 1.40 \pm 0.40; IL-1b 1.40 \pm 0.35; IL-6 1.53 \pm 0.28; IL-8 1.73 \pm 0.32 units) and decreased in group I (IL-1a 0.25 \pm 0.23, IL-1b 0.25 \pm 0.23, IL-6 0.50 \pm 0.27, IL-8 0.93 \pm 0.36); p<0.05 I vs II; I vs III (beside IL-8); II vs III. The number of neutrophils infiltrated adenoid tissue showed local inflammation and did not differ significantly among three groups. We conclude that in children with VEB, CMV infection cytokine production is suppressed in comparison with groups with Streptococcal infection or unclear etiology.