Background and Aims Informed consent underpins medical practice. However, the immediacy of PICU can make obtaining informed consent challenging. Nevertheless, consent could be obtained for less urgent procedures and investigations.

We aimed to survey the current practice of obtaining consent for commonly performed procedures and investigations.

Method We conducted a survey of UK PICUs and Paediatric Transport Services to determine if consent is obtained and the form it takes.

Results We obtained responses from 16 PICUs or transport services. No unit has a written consent policy.

Abstract 470 Table 1

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Written Consent</th>
<th>Verbal Consent</th>
<th>No Consent</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intubation</td>
<td>0</td>
<td>2</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Arterial or Central Line</td>
<td>0</td>
<td>2 (including 1 occasionally)</td>
<td>14</td>
<td>Occasionally (n=1)</td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>1</td>
<td>1</td>
<td>14</td>
<td>Time permitting (n=1); Occasionally (n=1)</td>
</tr>
<tr>
<td>Chest drain</td>
<td>1</td>
<td>2</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>PD catheter</td>
<td>3</td>
<td>0</td>
<td>8</td>
<td>Not applicable (n=5)</td>
</tr>
<tr>
<td>Bronchoscopy (on PICU)</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>Not applicable (n=5)</td>
</tr>
<tr>
<td>Bronchogram</td>
<td>2 (including 1 occasionally)</td>
<td>0</td>
<td>5</td>
<td>Not applicable (n=5); Occasionally (n=1)</td>
</tr>
<tr>
<td>CT Scan</td>
<td>1 (only if contrast required)</td>
<td>1</td>
<td>14</td>
<td>Follow local guideline for transport service (n=2)</td>
</tr>
<tr>
<td>MRI</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>Follow local guideline for transport service (n=2)</td>
</tr>
</tbody>
</table>

Conclusion Current practice is variable both across and within units. Predictably, consent is most commonly obtained for less urgent procedures; consent may be impossible for time critical procedures. There are aspects of consent that the PIC community may need to review - for example the dichotomy of obtaining consent for the same procedure (eg bronchoscopy) being undertaken in theatre but not on PICU.

Abstracts

472 THE INFLUENCE OF AEROPOLLUTANTS ON THE DEVELOPMENT OF ASThma (BA) IN CHILDREN

VA Tanaga, TV Kobets. Paediatric, Crimea State Medical University, Simferopol, Ukraine

Aim The aim of our study was to evaluate the impact of aeropollutants on the development of asthma in children.

Materials and methods To solve this problem we used the method of compatibility of geochemical and medical data using GIS technologies and the R-factor analysis. Using our own and compilation data we have created database with the frequency of asthma disease in children in different cities of Crimea. Average annual data on the pollution of the cities by different gases and dust were taken at the local medical service. Then, having made the database with the calculated values of the factors at each point.

Results The study in some cities we have found out only 3 global integrated pollution zones. We have found out that the highest incidence of asthma is observed in adolescents and it is 10 times higher than for 7–14-year-old children, this group of children is the most susceptible to the effects of polluting factors. All the studied pollutants: carbon monoxide, dust, nitrogen dioxide, sulfur dioxide, formaldehyde et al. in case of increasing of their levels in the air, are fully involved in the development of asthma in children. But even single limit doses of dust and ammonia (normal maximum allowable doses a year) within the year for children with asthma are significant and contribute to the development of disease exacerbation.

Conclusion The R-factor analysis can solve many problems for the prevention of disease including asthma.

473 DETERMINING THE CORRELATION BETWEEN THE SCAR SIZE OF BCG AND SUFFERING FROM ASTHMA IN CHILDREN, BY ASSESSING THE LEVEL OF THELPER1/ THelper2

doi:10.1136/archdischild-2012-302724.0472

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CARE FOR THE CHILD WITH A RARE DISEASE: A JOINT VENTURE

doi:10.1136/archdischild-2012-302724.0471

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Novel digital communications and data registration add to a collaborative management approach for chronic diseases. Primary health care (PHC) providers, patients, and families can effectively prevent many major contributors to the disease burden. Patients need information, motivation, and skills in prevention and self-management. Prevention measures should be provided by professionals. This study aims at establishing opportunities for PHC to detect children with rare and chronic conditions and provide PHC with tools for personalized prevention for children.

Methods 938 newborns who followed in the Dutch youth health records, during 2 years to detect children with a rare condition. The preventive scheme includes registration of pregnancy and delivery information, neonatal and vision screening, growth-, development and physical evaluation.

Results 12 children had been diagnosed because the child’s obvious congenital anomalies recognized at birth or presenting with an acute illness. In another 10 children, the first signs and symptoms were recorded at the PHC. Of all 22 children, 5 children have a condition suitable for a coordinated care program with help of e health. We developed a system based on clinical “Detailed Clinical Models”, for self management and continuous preventive care for children with a rare condition in primary care.

Conclusion Rare diseases can be detected in primary care and after proper diagnosis primary care can again be involved in collaborative management.

Determining the correlation between the scar size of BCG and suffering from asthma in children, by assessing the level of Thelper1/ Thelper2

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The Bacille Calmette-Guérin (BCG) vaccine is used more than any other vaccines in the world, whereas a lot of studies have spoken about allergy and its relationship with the BCG vaccine. The aim of this study was to determine the relationship between the levels of Thelper1 (INF-gamma)/Thelper2 (IL-4, IL-15) in children suffering from Asthma and the scar size of BCG in them. 100 children who have got scar, 60 of them suffered from asthma and 40 did not suffer from it, were studied. The Chi-square test revealed that the frequency of cases with scar size larger than 5mm, is 43% in Asthmatic patients and 70% in control group that the observed difference was statistically significant (P = 0.01). T test also revealed that the average of INF-gamma is considerably lower in patients suffering from Asthma than the control group. (6.95±3.83 (pg/ml) in asthmatic group compared with 10.75±6.98 (pg/ml) in control group) (P = 0.001) whereas the average of IL-4 (30.90±16.51 (pg/ml) in asthmatic group compared with 9.55±7.44 (pg/ml) in control group) (p<0.001) and IL-13 (48.85±13.66 (pg/ml) in asthmatic group...
**HUMORAL IMMUNITY IN CHILDREN WITH CHRONIC TONSILLITIS**

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**Background** Chronic tonsillitis is a common problem for pediatricians and otorhinolaryngologists.

**Subjects** We examined 24 children and 15 adult patients with chronic tonsillitis.

**Methods** Immunologic examination included analysis of: total leukocytes; absolute and relative lymphocytes; C reactive protein (CRP), antistreptolysin O (ASO), rheumatoid factor; investigation of humoral immune factors: absolute and relative B lymphocytes, serum IgA, IgM, IgG, circulatory immune complexes, interleukin amount - IL-4, IL-5, IL-18 in blood serum.

**Results** Increasing level of the absolute lymphocytes amount (2.92 ± 0.24, 2.2 ± 0.11) (p = 0.04), interleukin - 8 (229.09 ± 73.63, 35.05 ± 14.64) (p = 0.047) and interleukin - 1 β level (191.19 ± 68.44, 10.88 ± 4.28) (p = 0.045) were observed in children. Average indices of interleukin-8 and interleukin-1 β in children is in 6.5 and 17.4 times higher than in adults.

**Serum IgA level in adults was significantly higher than in children (1.36 ± 0.16; 1.92 ± 0.19) (p=0.038). An antistreptolysin-O titre in adults in comparison to children (162.5 ± 45.53; 216.67 ± 45.78) is higher in 1.4 times.

**Conclusions** Nonspecific defense factors play an important role in children with chronic tonsillitis, while in adults the main role is held by specific immune response. Comparative analysis of anti-inflammatory cytokine synthesis by immune competent cells in chronic tonsillitis proved the fact that in children it is much higher than in adults.

**AUTOIMMUNE LYMPHOPROLIFERATIVE SYNDROME IB: IMPROVEMENT WITH RAPAMYCIN**

G Lozano Sánchez, M Rivera Cuello, P Ababi. Paediatric, Hospital Carlos Haya, Málaga, Spain

**Introduction** Autoimmune lymphoproliferative syndrome (ALFS) is a disorder on a defect in the apoptosis of lymphocytes with lymphoproliferation and immune dysregulation. Type Ib, defined by mutation in the gene that encodes the protein FAS-ligand, is a rare entity.

**Case report** A 9-month-old male infant was referred because a failure to thrive and abdominal distention. Physical examination showed pallor, signs of severe malnutrition, axillary and inguinal lymph nodes, hepatomegaly and giant splenomegaly. Family background: parents, cousins of Moroccan origin, brother died at the age of 4 when he was under study for a giant visceromegaly. Complementary tests highlighted severe anemia (Hb 7.80 g/dl) and thrombocytopenia (platelets 7600/mm3), paravertebral lymphoid proliferation of 4 cm, elevation of IL10, soluble CD25, 28% T lymphocytes double negative (CD4- and CD8-) in peripheral blood and cell culture with defect of apoptosis in one of the samples. The genetic study identified the mutation of the gene TNFSF16 which encodes FAS-ligand-protein. After the diagnosis of ALFS type Ib, treatment with rapamycin was started at doses of 2 mg/m²/day. An optimal evolution was observed, with a reduction of visceromegaly size after 30 months of treatment, without adverse events by the time.

**Conclusion** We emphasize the importance of the suspicion of this entity in children with chronic visceromegaly, especially with family history. Despite the few existing data on treatment with rapamycin for this disease and children in general, we have seen an appropriate response and a good tolerance in this patient.