1305

A DIAGNOSTIC DEVICE FOR ORAL AND PHARYNGEAL EXAMINATIONS OF CHILDREN - FOLDING-SCOPE FOR THE ORAL AND PHARYNGEAL CAVITIES

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Although children may dislike and/or resist oral and pharyngeal examination with a tongue depressor, they enjoy lollipops on sticks, eating with spoons, forks, and chopsticks, and brushing their teeth. Many reports have noted this apparent contradiction, since pediatric patients are often treated after toothbrushes or chopsticks penetrate the pharyngeal wall. Those critical reports suggested that it is important to consider psychological factors when examining the oral cavity and pharynx.

We therefore developed a novel device to observe the inside of the mouth without using a flashlight, tongue depressor, or head mirror. Now we developed a new attachment to the AWS (special electrical fiberoptic for tracheal intubation through the mouth for anesthesia and emergency situations; PENTAX Co., Tokyo, Japan) for observations inside the oral cavity and pharynx. Our newly system is a useful tool not only for diagnostic examinations but also for treatment without causing discomfort or distress to patients and their families without gag-reflex.

1306

MODERN AEROSOL DELIVERY DEVICES IN PRETERM NEONATES

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Background and aims: Infant respiratory distress syndrome and bronchopulmonary dysplasia are serious respiratory diseases in preterm infants. Aerosol therapy in these infants is challenging due

to narrow airways, low tidal volumes, high breathing frequency, lack of cooperation and lack of specialised devices. Moreover, lung deposition is low. Our aim was to evaluate efficiency and efficacy of standard devices versus a modern aerosol delivery device.

Methods: Using salbutamol as a drug marker in 5-6 measurements for each device, we studied in an upper airway model of a 32-wks preterm infant (1750 grams) PARI Pharma's investigational eFlow® nebuliser prototype for babies (VMD 3.0 µm), a jet nebuliser (Intersurgical® Cirrus, 3.5 µm VMD) and a pressurised metered dose inhaler (pMDI, GSK) with a detergent coated spacer (Aerotrach Plus®) as used in our NICU. A filter was placed below the infant model's 'trachea' to capture the drug dose that would have been deposited in the lung (lung dose). Statistics were carried out using SPSS 17.0.

Results: Lung dose (% of nominal dose) was 1.5%, 7% and 21% for the jet nebuliser, pMDI-spacer and investigational eFlow nebuliser respectively ($p < 0.001$). Jet nebuliser residue was 69%, and 11% for the investigational eFlow nebuliser ($p < 0.001$).

Conclusions: The lung dose was significantly lower for the jet nebuliser and pMDI-spacer compared with the investigational eFlow nebuliser, but arguably still sufficient for bronchodilator delivery. If higher lung doses are required, more specialised vibrating membrane devices, designed specifically for use in infants, might be considered.

1307

CLINICAL EFFECTIVENESS OF THE NEW ECOLOGICALLY PURE MEDICATION - ASTHMANOL IN CHILDREN WITH BRONCHIAL ASTHMA

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Background: It is well known that non-specific diseases of respiratory system are at the prominent position within the structure of children's diseases. We regard that any research dealing with seek of effective medications consisting of natural components is of great significance, as these are Evidence-Based unbiased clinical research, designed in accordance with internationally accepted standards, concluding of which would

protect children's population from side effects of numerous drugs.

Aim: To evaluate the use of medical preparation Asthmanol for BA and other respiratory obstructive diseases.

Methods: Medical preparation offered by us, Asthmanol, is composed from ecologically pure ingredients. Preparation Asthmanol has passed key stages of pharmaco-epidemiology. We collected data on sex, age, respiratory function and on asthma control questionnaire (ACQ).

Results: Of 255 children aged 5-16 years with BA were randomized 1:1 to receive Asthmanol or placebo. Symptomatic medications were provided as rescue medications to both groups. The values of respiratory function before beginning the treatment with Asthmanol were: FEV1 $87,5 \pm 20,4$ and FEF25-75 $39,9 \pm 32,6$. After treatment they were $88,7 \pm 13,8$ and $58,7 \pm 19,5$ respectively. We found a improvement in the asthma control questionnaire, with pre- and post values of $22 \pm 7,4$ and $5,9 \pm 7$ respectively. Statistically significant improvements were found for the BA group relative to placebo ($p=0,047$).

Conclusion: The results of our study, according to GINA and PRACTALL EAACI/AAAAI guidelines, show that therapy with medication consisting of natural components is an effectiveness in asthmatic children. There was important improvement in the quality of life and in the control of asthma with Asthmanol.

1308

LUNG TUBERCULOSIS IN CHILDREN-FOLLOW UP

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Introduction: It is estimated that two to three million of people die from TBC every year, hundred thousand children out of that number. Problems dealing with TBC are multiplied with AIDS appearance, drug resistency, infections with multiresistant tbc species, possible changeability of virulency. Eradication and decreased morbidity by the end of 20th century is not realized.

Methods: Retrospective analysis of hospitalized patients in the period 1999-2003 and prospective follow up in the period 2004-January 2010. Distribution of patients is followed according to sex, age, contact with tbc, vaccinal status and clinical features.

Results: In this period, 39 children are treated, 24 males (61,5%) and 15 females (38,5%). Data about contact 31 (79,5%), no BCG scar 27 (69%). 22 (56%) are diagnosed as primary TBC, in 4 (10,2%) patients Miliary TBC, in 6 (15,3%) TBC pleuritis, in 2 (5,1%) TBC meningitis, in 2 (5,1%) Phtisis pulmonum and in 3 (7,6%) TBC meningitis. In 2004. we had last patient diagnosed as Miliary TBC.

Conclusion: We always have to consider TBC and in 21st century it is not „forgotten disease“.

According to fact that we have not had hard forms of diseases since 2004, could we hope to decreased morbidity in total population and reach the level of morbidity in developed countries?

1309

THE ETIOLOGICAL VALUE OF LACTATE DEHYDROGENASE IN RESPIRATORY TRACT VIRAL INFECTIONS

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Background: Many tissues in the body contain lactate-dehydrogenase (LDH) including lungs, liver and muscles. Among five isozymes described, LDH-3 was discovered in the lungs. Interleukin 6(IL-6) is a pro-inflammatory cytokine secreted by T cells and macrophages and high serum values are suggestive for bacterial infections.

Aims: To evaluate LDH prognostic value as a marker for etiology of lower respiratory tract infections (LRTI); to monitorise LDH values variations during viral LRTI; to establish the correlations between "C" reactive protein (CRP) and LDH in viral LRTI.

Methods: Authors have analyzed all children admitted for acute LRTI (pneumonia, bronchiolitis, bronchitis) during 1 week period. The children were investigated at Day 0(D0) and Day 4(D4) of hospitalization: LDH, CRP, ASAT, ALAT, IL-6.

Inclusion criteria: Children less than 7 years of age, no liver disease (ALAT normal range), no