

029 - Comunicación Oral/Oral communication

Salud infantil III

Child health III

Viernes 3 de Octubre / Friday 3, October
18:00:00 a/to 19:30:00

Moderador/Chairperson:
Finn Rasmussen

APGAR SCORE AND RISK OF EPILEPSY IN CHILDHOOD: A REGISTER-BASED FOLLOW-UP

Vera Ehrenstein*, Henrik T. Sørensen**, Lars Pedersen**, Kenneth J. Rothman*

*Department of Epidemiology, Boston University School of Public Health, Boston, USA.
**Department of Clinical Epidemiology, Aarhus and Aalborg University Hospital, Aarhus, Denmark.

Introduction: Apgar score measures infants condition at birth and may be a proxy measure of brain hypoxia. Low Apgar score has been linked to increased infant mortality and neurologic morbidity, including cerebral palsy, mental retardation, and learning disabilities. We used population-based Danish Registers to examine the relation between low 5-minute Apgar score and the incidence of epilepsy in childhood.

Methods: From the Birth Register, we obtained data on 5-minute Apgar score and other birth indicators for 30,678 term (≥ 37 weeks of gestation) single live births occurring between 1996 and 2001. Birth data were linked with data on epilepsy diagnoses and on parental history of epilepsy from the Hospital Discharge Database. We followed the subjects for up to 6 years. We used Cox's proportional hazards regression to obtain adjusted rate ratio estimates for epilepsy among infants with low (0-3) and intermediate (4-6) Apgar scores, adjusting for parental history of epilepsy, mother's age, partner status, smoking during pregnancy, mode of delivery, birth presentation, size for gestational age, birth order, and postterm delivery.

Results: We observed 76 cases of epilepsy for the overall incidence rate of 80 per 100,000 person-years. The rate ratio [95% confidence interval] was 34.2 [12.4, 94.2] among those with 5-minute Apgar score of 0-3 and 5.5 [1.3, 22.7] among those with Apgar score of 4-6, compared with those who had normal Apgar score of ≥ 7 .

Conclusion: Low Apgar score is a routinely recorded clinical indicator that is associated with increased incidence of epilepsy in childhood with the evidence of dose-response relation.

RESPIRATORY SYMPTOMS SUGGESTIVE OF ASTHMA AND FACTORS RELATED TO THE HOME ENVIRONMENT. RESULTS OF THE ISAAC I AND III CROSS-SECTIONAL STUDIES IN MÜNSTER, GERMANY

Thomas Behrens*, Wasim Maziak*, Peter Rzehak**, Stephan K Weiland**, Ulrich Keil*

*Institute of Epidemiology and Social Medicine, University of Münster, Münster, Germany. **Department of Epidemiology, University of Ulm, Ulm, Germany.

Introduction: The indoor home environment (e.g. indoor air pollution, mites, passive smoking etc.) has been associated with the presence of atopic symptoms and diseases. In this study we assessed the association between several indoor factors and self-reported respiratory symptoms and asthma in a representative, school-based population of 6-7 year old children.

Methods: Two cross-sectional surveys five years apart (1995-2000) were conducted, using data from the ISAAC Phase I and III, collected in Münster, Germany (N=6,996, response rate 81.8%). The prevalence ratio (PR) for indoor exposures (e.g. cooking and heating with fossil fuels, presence of synthetic or feather bedding, a carpet in the bedroom, the presence of pets, passive smoking etc.) and asthma-related outcomes (wheezing during the last 12 months (current wheeze), speech-limiting wheeze, sleep disturbance due to wheeze, exercise-induced wheeze, nocturnal cough, and lifetime prevalence of asthma) was calculated after testing for several potential confounders.

Results: After adjusting for study phase, parental atopy, and social status, the following exposures showed the strongest associations with the study outcomes: synthetic bedding with all respiratory conditions (PR ranging from 1.63 to 3.88 in males and 1.59 to 3.18 in females). Passive smoking showed significant associations among girls with current wheeze, speech-limiting wheeze, and exercise-induced wheeze (PR ranging from 1.52 to 2.09), and with cough in boys. Feather bedding and a carpet in the child's bedroom were negatively associated with most respiratory outcomes (PR range of 0.24-0.66 in boys and 0.31-0.65 in girls). Presence of a carpet was positively associated with most respiratory conditions in boys. The positive associations for synthetic bedding disappeared when the analysis was based on participants who did not report a change to synthetic bedding due to respiratory or atopic conditions. When feather bedding was imputed in participants who had changed bedding, the PR changed to positive associations for all studied outcomes (Phase III data only). When presence of a carpet in the child's bedroom was imputed in participants that had reported its removal, the PR also reversed to positive associations. Using a gas stove for cooking (only assessed in Phase I) was associated with some outcomes in girls.

Conclusions: Only few indoor factors showed significant associations with the studied respiratory outcomes. The change of associations for bedding and carpets when analysis was restricted to participants who had not changed bedding and when presence of feather bedding or a carpet was imputed suggests that the observed effects are a result of asthmatics' altered behavior. Results should be interpreted with caution due to the known methodological restrictions and possible biases associated with cross-sectional study designs.

AN IPD META-ANALYSES TO IDENTIFY SUBGROUPS OF CHILDREN WITH OME THAT MIGHT BENEFIT FROM TREATMENT WITH VENTILATION TUBES

Gerhard A. Zielhuis¹, Maroeska M. Rovers², Nick Black³, George Browning⁴, Dick Maw⁵, Marc P. Haggard⁶

¹Department of Epidemiology and Biostatistics, University Medical Centre, Nijmegen, The Netherlands. ²Julius Center for Health Sciences and Primary Care, University Medical Center, Utrecht, The Netherlands. ³Department of Public Health & Policy, London School of Hygiene & Tropical Medicine, London, England. ⁴MRC Institute of Hearing Research, Glasgow Royal Infirmary, Glasgow, Scotland. ⁵Department of Otolaryngology, St. Michaels Hospital, University of Bristol, Bristol, England. ⁶MRC ESS Team, Addenbrooke's Hospital, Cambridge, England.

Introduction: Several randomized clinical trials (RCTs) have been performed to study the effectiveness of treatment with ventilation tubes. Individual trials, however, lack the power to identify subgroups via interactions. Individual Patient Data (IPD) meta-analysis over several trials increases the ability to document such subgroups. The objective is to identify subgroups of children with OME that might benefit from treatment with ventilation tubes.

Methods: An IPD meta-analysis on seven RCTs (N = 1,232 children). Outcome measures that could be studied were time with effusion, mean hearing levels and language development. Subgroups that could be studied were: hearing level (HL) at baseline, AOM, common colds, attending day care, gender, age, socioeconomic status, siblings, season, smoking, and breast fed.

Results: In the trials that treated both ears only the interaction between day-care and treatment was significant. After 6 months follow-up, children in the ventilation tube group attending a day-care center heard 7 dB better than children attending a day-care center in the watchful waiting group. The difference in children not attending a day-care center was 0.2 dB. This interaction disappeared by 12 months. No interaction between ventilation tubes and day care attendance was found for language development. None of the other subgroups showed a significant interaction with treatment. In the trials that treated only one ear baseline hearing showed a significant interaction with treatment, but only with a cut-off of 28 dB or lower.

Conclusion: Watchful waiting appears to be an adequate management strategy for many children with OME. Children that grow up in an environment with a high infection load, e.g. children attending daycare, appear to benefit more from treatment with ventilation tubes. This finding should, however, be studied in more detail before final recommendations can be made. In addition, future research should focus on new treatment options, as ventilation tubes only appear to be effective in the short term.

440

MALOCCLUSION IN PRIMARY DENTITION - A LIFE COURSE STUDY FROM BIRTH TO SIX YEARS

Karen Glazer Peres¹, Maria do Rosario Latorre², Aubrey Sheiham³, Marco Aurelio Peres⁴, Cesar Gomes Victora⁵, Pedro Gonzalez Hernandez⁶, Angela Maria Maas⁷, Ana Regina Romano⁸, Fernando Celso Barros⁹

¹Epidemiology, University of Sao Paulo and UNISUL, Brazil. ²Epidemiology, University of Sao Paulo, Brazil. ³Epidemiology and Public Health, University College London, United Kingdom. ⁴Public Health, University of Santa Catarina, Brazil. ⁵Social Medicine, University of Pelotas, Brazil. ⁶Dental School, University of Pelotas, Brazil. ⁷Dental School, University of Pelotas, Brazil. ⁸Dental School, University of Pelotas, Brazil. ⁹Latin American Center for Perinatology and Human Development, PAHO/WHO, Montevideo, Uruguay.

Objectives: To assess very early life risk factors affecting malocclusion in the primary dentition.

Methods: A cross-sectional study nested in a birth cohort study started in 1993, in Pelotas, Brazil, was carried out. A sample of 400 children aged 6 was examined. The Foster and Hamilton criteria were used to classify occlusal patterns. Data concerning social conditions, perinatal and childhood health and behaviour were obtained at birth and at the 1st, 3rd, 6th and 12th months of life and then later, in the fifth year of childrens' life. Unconditional univariate and multiple logistic regression analysis were performed.

Results: The prevalence of anterior open bite was 46.3% (41.2-51.4), posterior cross-bite was 18.2% (14.2-22.2) and class 2 and 3 canine relationship was 15.2% (11.5-18.9). The risk factors for anterior open bite developing were maternal height (OR=1.9 [1.2-3.0]), maternal age between 30 to 39 years old (OR=2.4 [1.1-5.5]), duration of breastfeeding between 4 to 8.9 months (OR=3.0 [1.7-5.9]), breastfeeding duration between 1 to 3.9 months (OR=3.1 [1.7-5.6]), less than one month of breastfeeding (OR=2.4 [1.1-4.9]), mother's intention to give dummy to the child at birth (OR=3.0 [1.2-7.9]), dental caries experience (OR=2.0 [1.2-3.4]), dummy sucking between 12 months to five years (OR=10.6 [5.8-19.1]), and digit sucking (OR=3.1 [1.3-7.2]). Maternal work showed a borderline association with posterior cross bite (OR=1.7 [1.0-3.0]) while breastfeeding duration between 4 to 4.9 months (OR=3.0 [1.2-7.5]), breastfeeding duration between 1 to 3.9 months (OR=3.1 [1.3-7.3]), and malocclusion in canine relationships (OR=3.8 [1.9-7.4]) were significantly associated. For malocclusion of canine relationships developing, decay and missing teeth (OR=2.1 [1.1-4.1]) and posterior cross bite (OR=3.0 [1.6-5.8]) were risk factors.

Conclusions: Malocclusion in the primary dentition was associated to early life factors and common risk factors for other childhood diseases. These findings support the common risk approach for intervention to prevent malocclusion in the primary dentition.

441

ETIOLOGY OF TRAUMATIC DENTAL INJURIES IN 11 TO 13-YEAR-OLD SCHOOLCHILDREN

Jefferson Traebert*, Izabel C.S. Almeida**, Wagner Marceles***

*Pós-Graduação Odontologia/Grupo de Pesquisa em Odontologia, Universidade do Oeste de Santa Catarina, Florianópolis/Joaçaba, Brasil. **Pós-Graduação em Odontologia, UFSC, Florianópolis, Brasil. ***Centre for Oral Biometrics, Barts and The London, Queen Mary, University of London, London, UK.

Objectives: The aim of this study was to assess place, activities and human intention related to traumatic dental injury (TDI) events in 11-13-years-old schoolchildren in Biguaçu, Brazil. Also, to test whether socio-economic status is related to TDI.

Methods: A cross-sectional survey was carried out. It included 2,260 schoolchildren enrolled in all 28 public and private schools in Biguaçu, Brazil. A trained and calibrated dentist collected the data through clinical examinations and interviews. Clinical examination included type of TDI, treatment provided and needed, size of incisal overjet and type of lip coverage. The criteria for TDI used in the Children's Dental Health Survey in the UK were adopted.

Results: The response rate was 90.6%. The prevalence of TDI was 10.7%. Boys experienced more TDI than girls, 13.6% and 7.6% (P<0.001). Father's and mother's level of education were not statistically associated with TDI (P>0.05). Children who had an incisal overjet greater than 5 mm had more dental injuries than those whose incisal overjet was up to 5 mm (P=0.003). There was no association between inadequate lip coverage and TDI (P>0.05). Results of multiple logistic regression showed that sex and incisal overjet remained statistically associated with dental injuries, after adjusting for other risk factors. The main activities associated with TDI were physical leisure activities (28.9%), playing with other people (18.2%), collisions (9.1%) and falls (8.3%).

Conclusions: Using a different approach from most previous studies, this one explored further what happened at the time of the TDI event and showed that 23.7% of TDI were non-accidental.