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AMPHETAMINE ABUSE DURING PREGNANCY. FOLLOW-UP OF CHILDREN AFTER 14 YEARS. Margareta Eriksson, Lars Cernerud, Björn Johnson, Gun Steneroth Rolf Zetterström. Department of Pediatrics, Karolinska Institute, St Görans Hospital, Stockholm, Sweden.

Sixtyfive children born to women who all used amphetamine during pregnancy have been followed prospectively since birth 1976-77. The children have been tested and examined regularly, demonstrating that social environmental factors influence the child's growth and somatic status while exposure for amphetamine during fetal life seem to influence the child's test results and behaviour up to the age of 8 years.

After 14 years information was collected about school achievement, health, somatic growth and psychosocial environment. Only 20 children (30%) were still in the custody of their biological mothers. Ten children (15%) were one class below that for their biological age. Corresponding figure in Sweden is < 5%. Grades in language, mathematics and sports were significantly lower than the mean of their schoolmates. The difference was most pronounced in boys. Weight and length were decreased in girls and increased in boys in comparison with Swedish school children born in the same year. Socioenvironmental risk factors correlated with poor outcome.

Amphetamine abuse during pregnancy will influence the development of exposed children up to the age of 14 years.

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IBUPROFEN AND PARACETAMOL: EFFECTIVE ANTIPIRETTICS IN CHILDREN WITH FEBRILE SEIZURES. Arjen van Esch¹, Henriëtte A. van Steensel-Moll¹, Ewout W. Steyerberg¹, Martin Offringa¹, Dik J. Habbema¹, Arda Derksen-Lubsen¹.

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Introduction The possibility to reduce the risk of febrile seizure (FS) recurrences with antipyretics has gained interest. To compare the antipyretic efficacy of Ibuprofen and Paracetamol in children with FS we performed a randomized, multiple dose, double blind, cross-over clinical trial. Study medication was either Ibuprofen syrup (5mg/kg per dose) or Paracetamol syrup (10mg/kg per dose) at 6 hours intervals during two days. No antibiotics were prescribed.

Participants/Measurements 70 patients with a history of FS (mean age 2.1 years) were assigned to treatment at the occurrence of a fever with rectal temperature $\geq 38.5^\circ\text{C}$. 22 patients were included during two fevers. Temperature was recorded at 0, 2, 4, 6, 12 and 24 hours after the first dose. Temperature at 4 hours, overall mean temperature and the highest temperature during treatment were evaluated. Covariance analysis corrected for base-line temperature, age, weight and clinical fever diagnosis.

Main Results Ibuprofen lowered temperature from 39.1°C base-line to 37.7°C overall mean, Paracetamol from 39.2°C to 38.0°C . Ibuprofen showed 0.50°C more fever reduction at 4 hours after the initial dose ($p=0.04$). Also, overall mean temperature was 0.26°C lower and the highest temperature was 0.30°C lower during Ibuprofen treatment. In cross-over analysis respective differences were 0.66°C ($p=0.03$), 0.40°C and 0.36°C in favour of Ibuprofen. Two febrile seizures occurred during Ibuprofen treatment and three during Paracetamol treatment.

Conclusions Ibuprofen and Paracetamol are effective antipyretics in children with a history of FS. In the studied doses Ibuprofen reduces fever more than Paracetamol. Future clinical trials may determine the value of antipyretic treatment as a prophylaxis of recurrent febrile seizures.

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BONE MINERAL DENSITY IN CHILDREN AFTER RENAL TRANSPLANTATION

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Successful renal transplantation is supposed to correct the majority of bone mineral metabolism disturbances induced by chronic renal failure. We examined bone mineral density (BMD) in 14 children (8 girls, 6 boys) aged 8 ± 4 years at the time of renal transplantation (Tx). Dual energy X-ray densitometry of lumbar vertebrae (L1-L4) was performed within one year preceding Tx (T0), 6, 12 and 24 months after Tx (T6, T12 and T24 respectively). The results of BMD obtained in g of hydroxyapatite per cm^2 of spine projected area were subsequently transformed to Z scores (Z) for normal pediatric population. All patients had a well functioning renal graft at T6, T12 and T24, median serum creatinine levels were 54, 63 and $84 \mu\text{mol/l}$, respectively. BMD \pm SD decreased from initial level of 0.65 ± 0.18 at T0 to 0.59 ± 0.16 at T6 ($p < 0.05$). BMD \pm SD measured at T12 (0.61 ± 0.15) and T24 (0.67 ± 0.16) was not significantly different from T0. Similar significant ($p < 0.01$) decrease of BMD expressed in median Z was observed between T0 (0.19) and T6 (-1.04), remained significantly ($p < 0.01$) lower at T12 (-0.93) and increased to -0.52 at T24 ($p < 0.05$ vs T0). In conclusion, children after kidney transplantation experienced a significant decrease of bone mineral density during the first 6 months after operation despite normal graft function. Progressive improvement of BMD was noted 12 and 24 months after Tx.

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THE INFLUENCE OF CHRONIC ATOPIC ECZEMA ON CHILD BEHAVIOUR AND MOTHERS ATTITUDE TOWARDS HER CHILD IN THE FIRST THREE YEARS OF LIFE.

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Data: In 1990 a birth cohort (N:1314) was assembled out of 7609 newborn infants from 5 German cities. To observe the natural course of a.e. the infants are medically examined 7 times from birth to their 3rd year of life. Additionally, data on infant's health, development, temperament and behaviour (CBCL 2-3), family climate, as well as socioeconomic status are collected by interview or questionnaire. **Results:** Within the first 18 months 11% of the infants showed clear signs of a.e. at one point in time, 4,5% several times. In view of prevalence rates about 40%, sleep problems appear to be rather frequent between 6 and 24 months. When controlled for the infants's place of sleep and breast feeding. Parents of children with a.e. reported significantly ($p < .05$) more often sleep problems at 6 (68%) and 18 (72%) months but only if they slept together with their child. Children with chronic a.e. (at 6 and 12 months) were given the highest mean score on a difficulty scale (ANOVA: $F = 4.7$, $df = 2$, $p < .02$). **Conclusion:** Although sleep problems in infancy are common, a.e. seems to enhance their prevalence. As a result of severe forms of a.e. mothers perceive their infant's behaviour to be more difficult.

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RECEPTORS FOR PHAGOCYTOSIS AND ADHESION ON NEUTROPHIL GRANULOCYTES IN NEWBORN INFANTS.

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Newborn infants have an increased susceptibility to serious infections. Neutrophil granulocytes play an important role in the defence against infections. We have studied the expression of the receptors for phagocytosis and adhesion (CD11b, CD16, CD18, CD32, CD35 and Leu8) on neutrophil granulocytes from newborn infants and compared with results found in adults.

Subjects and methods: Blood samples were taken from 18 term newborn infants (cord blood) and 30 healthy adults. The granulocytes were fixed with formaldehyde and incubated with monoclonal antibodies against each receptor. The cells were then analyzed by flow cytometry (Epics Profil II).

Results: For CD11b, CD16, CD18, CD32, and Leu8, there was no significant difference in receptor expression between granulocytes from newborns and those from adults. There was a trend towards increased expression of the CD35 receptor ($p=0.068$), and the expression of CD16 was significantly decreased ($p=0.046$) on granulocytes from newborns.

Conclusion: With exception for a tendency of an increased expression of the complement receptor CD35 and a decreased expression of the Fc-receptor CD16, no significant differences were found between newborn infants and adults.

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LOW TRIIODOTHYRONINE (T3) CONCENTRATIONS IN EXTREMELY LOW BIRTH WEIGHT (ELBW) INFANTS ASSOCIATED WITH DEXAMETHASONE TREATMENT.

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Preterm infants are jeopardized by the immature thyroid system. Dexamethasone is a widely used drug well known to inhibit the peripheral thyroxine (T4) conversion. We therefore studied the concentrations of T4 and T3 in 22 ELBW infants.

Methods: We obtained blood samples at delivery, 4, 7, and 14 days thereafter in (G1) 12 ELBW infants treated with dexamethasone during the first days of live (0.5 mg/kg day) because of arterial hypotension or severe lung disease and in (G2) 10 ELBW infants without dexamethasone.

Results:

G	GA(week)	BW(g)	T3 (ng/dl) median			T4 mg/dl day14	
	median		day1	day4	day7		
1	26	720	40.8	38.4	42.7	47.8	6.2
2	26	780	36.1	59.6	68.8	94.5	6.5

GA=gestational age; BW= birth weight

There was no physiological increase in T3 serum concentrations after birth in G1, whereas T4 and TSH showed a similar course in both groups (not shown). T3 concentrations were significantly lower in the dexamethasone treated infants at day 7 and 14.

Conclusion: Our data show evidence that the immature thyroid function of ELBW infants (hypothyroxinemia and transient primary hypothyroidism) is further adversely affected by dexamethasone.