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VESICOURETERAL REFLUX IS NOT RELIABLY DETECTED WITH RENAL ULTRASOUND.
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Nowadays, clinicians rely greatly on Renal Ultrasound (RU) as a screening examination. RU seems to be less sensitive than Fluoroscopic Voiding Cystourethrography (FVCU) for the detection of Vesicoureteral Reflux (VUR), but relevant percentages in large numbers of patients with Urinary Tract Infection (UTI) are scanty. This study evaluates the potential reliability of RU as a means to detect VUR in children with UTI. The population under study consisted of 288 infants and children (101 boys and 187 girls, median age 3.8 years) with UTI. RU and FVCU were performed within the same day. For data analysis both kidneys were considered separately for a total of 576 kidneys. Of 576 kidneys, VUR documented on FVCU in 116 (20%). In 85 of these refluxing kidneys (73%), the RU was normal and in 31 (27%) was abnormal. Of 517 normal kidneys on RU 85 (16%) had VUR on FVCU. In the remaining 59 kidneys with an abnormal RU (dublex system, dilatation, pyelonephritis, small scarred kidney), VUR was documented on FVCU in 31 (53%). This study confirms, that RU does not reliably diagnose VUR, since only 27% of the refluxing kidneys were identified on RU. On the other hand, patients with an abnormal RU would alert the clinician and radiologist to the increased possibility of VUR (53%). It is concluded, that a) RU is not an adequate substitute for the FVCU, if the clinical question is VUR in children with UTI,b)RU should be performed prior to FVCU.

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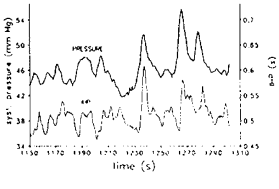
MODULATION OF HEARTRATE BY THE ARTERIAL BARORECEPTOR REFLEX (ABR) IN NEONATES. Monique Smeulders, Rachel Agbeko, Wim de Jong, André Koolen. Depts. of Neonatology and Clinical Physics, Sint Joseph Hospital, Veldhoven, The Netherlands.

In contrast to the amount of literature available on ABR in human adults, there is little information referring to neonates. We studied 17 "healthy" neonates: median gestational age 29 wk. (P25-P75: 28-31.2), median postnatal age 5 d (P25-P75: 4-8), median birthweight 1125 g (P25-P75: 980-1775). Systolic bloodpressure (SBP) was 55±10 mmHg (mean±SD) and instantaneous heart period (IHP) 422±38 ms(mean±SD). Arterial bloodpressure(ABP) was recorded in a quiet behavioural state during two separate periods of 10 minutes on the same day. The ABP signal was extracted from an indwelling arterial catheter, used for routine monitoring of vital functions. The analysis of the ABP signal was performed off-line by means of a fully computerized algorithm. We calculated the standard deviation (SD) of IHP and SBP; this SD was used as a measure of the overall spontaneous variability. Spontaneous long-term SBP variability results in IHP variability (see figure). We used the ratio between SD of IHP and SD of SBP as an estimate for the ABR modulation of heart rate (ms/mmHg). No difference was found between the two separate periods (Wilcoxon test). The median ABR was 5.1 ms/mmHg (P25-P75: 3.4-9.1). We showed a statistical significant correlation between ABR and SBP (r=-0.63 ; p=0.02) and between gestational age and SBP (r=0.64; p=0.02); no correlation was found between ABR and IHP or gestational age. Gestational age was not related to IHP. Conclusion: The ratio between SD of IHP and SBP is reproducible and is related to SBP. Our data suggest that the ratio between SD of IHP and SD of SBP is a valuable tool for estimating ABR in neonates.



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ASSESSMENT OF EARLY MOTOR BEHAVIOUR IN PRETERM INFANTS BY EVALUATION OF SPONTANEOUS MOVEMENTS.
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Videorecordings of spontaneous movements were conducted in 30 preterm infants (24 to 34 weeks of gestation) every two weeks until four months of corrected age at the Perinatal Center of Heidelberg. Qualitative judgement of motor behaviour was done by using visual Gestalt-perception of the "complexity", "fluency" and "elegance" of spontaneous movements according to Prechtl and Hadders-Algra (Early Hum Dev 1990 & 1992). All children were reexamined by classical neurological exam at 18 months.

At term age 12 infants showed normal and 18 abnormal movements . At 6-12 weeks movement quality changed from a "writhing character" to "transitional patterns" (oscillating, saccadic, fidgety). At four months of age we observed these "transitional movements" (before reaching and grasping developed) in 25 infants, all had a normal neurological examination at 18 months. The other 5 infants did not show "transitional movements". 4 of these 5 infants developed definite signs of cerebral palsy at 18 months.

We conclude that "transitional movements" are a positive developmental sign since all 25 infants with these movements had a normal neurological examination at 18 months (12 had been normal, 13 abnormal at term age). Qualitative evaluation of spontaneous movements in preterm infants by visual Gestalt-perception is proposed as a reliable and valid tool for the neurological assessment in early infancy.

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ASSESSMENT OF OUTCOME IN PREMATURE INFANTS BY TELEPHONE INTERVIEW.
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The need of quality control in neonatology demands follow-up of an increasing number of infants. These studies often have a considerable drop-out rate, are time-consuming and expensive. In 1992 we conducted a follow-up study by telephone interviews with all parents of very premature (< 32 weeks) infants, born 1986-1990 at the Perinatal Center of Heidelberg (n=442). Letters were written to all families before calling. 44% of the families had moved and had to be traced. Nevertheless 96% could be reached. The average time (±SD) needed per child was 65 (± 40) minutes (28 minutes for organization and 37 minutes for the standardized interview). The average costs per child were DM 12. It was our impression, that telephone interviews even can be superior to clinical interviews in some respects (emotional safety, no reponse-effects, not influenced by child's temporary mood).

A validation of the method was performed with a subgroup of 52 children at the age of 12 to 24 months. At telephone, a modified version of the Griffith Scales was used. In addition, parents measured weight, length and head circumference. Afterwards, the children were examined at the hospital. High correlations (r = 0.89 - 0.97) were found for growth parameters and different subscales of the Griffith-test (motor, social, hearing/speech, coordination).

Telephone interview as a new method is effective and reliable for follow-up studies of premature infants and allows nearly complete assessment of large groups of children.

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WHICH IS THE BEST TIMING OF EPO ADMINISTRATION IN ANEMIA OF PREMATURITY (AOP): RANDOMIZED CONTROLLED STUDY
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Objective: It is known that rHu-EPO treatment prevents successfully AOP during the period which administered (Soubasi et al., Pediatr Res 1993;34:675). However data on the duration and optimal timing of EPO administration is unavailable. **Methods:** 70 neonates with BW ≤ 1500 g, GA ≤ 31 wk were entered in a controlled study of EPO administration. 50 neonates (Group A) were randomized to take EPO 3×250 U/kg/wk sc (n=24) or no EPO (control n=26), early after birth (3-7 d) for 6 wks. Subsequently 20 neonates (Group B) were randomized to take EPO 3×200 U/kg/wk sc (n=10) or no EPO (control n=10) after their problems have been resolved and when they were on full enteral feeding. Retrospectively the Group A neonates were classified into uncomplicated and complicated (mechanical ventilation ± sepsis). Hematologic parameters, transfusion requirements and growth were followed during the whole hospitalization period. **Results:** Reticulocytes during EPO treatment were significantly higher in all EPO recipients as compared to their controls. Transfusions during EPO treatment are shown in the table. In Group B EPO was administered from the 3.4 ± 2.3 wk of life (1-6 wk range) for 5.6± 1.9 wk (3-8 wk range). Complicated infants did not benefit from EPO administration whereas both, uncomplicated neonates in Group A and neonates in Group B received significantly less blood transfusions during EPO administration.

		Complicated		Uncomplicated					
Group A	EPO250	5±2.5	(14/14)	0.2±0.4	(2/10)	Group B	EPO	0.2±0.4	(2/10)
	control	4.9±1.4	(14/14)	1±0.7	(9/12)		control	1.5±0.85	(9/10)

mean ± SD, (number of transfused infants / studied infants).

Conclusion: EPO should be administered only in ucomplicated neonates or when complications have been resolved and full enteral feeding has been established. We suggest that EPO therapy should be given until neonates are discharged from hospital.

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RELATIONSHIP BETWEEN URINARY COTININE, PASSIVE SMOKE EXPOSURE AND RESPIRATORY HEALTH IN CHILDREN
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As part of a longitudinal study, two urine samples (1991 and 1992) from 602 elementary-school children were collected to investigate the relationship between urinary cotinine excretion (UCE) and tobacco smoke exposure at home. As potential confounders the smoking person, the child's gender, diagnoses of asthma and asthmalike symptoms and the socioeconomic status were considered. Besides standardized questionnaires for ascertainment of data, gas-chromatography-selected-ion-monitoring was employed for measurement of UCE (ng cotinine/mg creatinine). The individual mean UCE levels in both surveys ranged between 1.2 and 25.2 ng/mg creatinine and were closely associated with the number of cigarettes consumed at home (p=0.0001). In about 40 % of the samples an UCE was detected. Maternal smoking was associated with a detectable UCE at a higher extent than paternal smoking. Of the confounding variables, low socioeconomic status (p=0.0009) and the size of the dwelling (p=0.033) turned out to be significantly associated with UCE. No association was found between UCE and asthma, asthmalike symptoms, gender and nationality. UCE was found in asthmatics (1991: 39.7 %, 1992: 40.3 %) with frequency similar to non-asthmatics (1991: 34.2 %, 1992: 45 %). The data suggests that the current measures for protection of children against passive smoking are not sufficient, particularly not in children with a history of asthma.