161 CYTOKINE SECRETION OF MONOCYTES IN HIV-INFECTION AND MODULATION BY IMMUNOGLOBULINS

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The factors influencing progression of HIV infection from asymptomatic infection to immunodeficiency have only poorly been understood, but cytokines secreted by infected monocytes have received considerable interest.
We have measured Interleukin 1 (IL-1), Interleukin 6 (IL-6), and Tumor Necrosis Factor levels secreted by monocytes of 41 HIV patients of different stages and of 21 HIV negative controls. Monocytes were isolated by Ficoll-Hypaque and adherence, stimulated in vitro with LPS and cytokines secreted measured by bioassay (IL-1, IL-6) or ELISA (TNF).
In vitro experiments testing the influence of immunoglobulins on cytokine secretion revealed a striking reduction of IL-1 and IL-6 secretion in the presence of IgG (10 - 25 g/l) to 5 - 10 % of the levels secreted by monocytes stimulated in the presence of medium alone.
We found no difference in cytokine levels secreted by monocytes neither between HIV positive patients and negative donors nor between different stages of HIV infection. Monocytes from patients treated by IgG (400 mg/kg once per month) secreted cytokine levels comparable to cells from patients without treatment.
We found that IgG added in vitro inhibits cytokine secretion of monocytes. In patients treated by IgG however no effect on cytokine release could be observed although the progression of AIDS seems to be influenced.

162 URINARY EXCRETION OF KYNURENINE AND MELATONIN METABOLITES OF TRYPTOPHAN IN CONVULSIVE DISORDERS IN CHILDREN.

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INTRODUCTION: In the present paper, we study the urinary excretion of tryptophan metabolites, in both the kynurenine and melatonin pathways in pediatrics patients with febrile and epileptic convulsions.
MATERIAL AND METHODS: The patients were classified as follows: GC (Control group, n = 39); FCG (Febrile convulsion group, n = 51); ECG (Epileptic convulsion group, n = 28). Taking into account the existence of a circadian rhythm in melatonin secretion, the groups were further divided into two subgroups (Day (9.00-21-00) / Night (21.00- 9.00). Melatonin was measured by RIA, while urine metabolites were measured by thin - layer chromatography. Statistical analyses included a two way ANOVA and comparison of the results.

RESULTS: CONTRASTS: DAY / NIGHT							BETWEEN GROUPS					
	aMT	KYN	OHA	AX	OHK	AK	aMT	KYN	OHA	AX	OHK	AK
F exp.	2.28	14.07	0.18	10.49	4.82	2.8	10.54	1.26	1.27	20.85	3.72	10.88
df	1;112	1;112	1;112	1;112	1;112	1;112	2;112	2;112	2;112	2;112	2;112	2;112
P	N.S.	0.001	N.S.	0.0001	0.05	0.01	N.S.	N.S.	N.S.	0.0001	0.05	0.0001

ABREVIATIONS: KYN: L-Kynurenine, 3-OHA: 3-OH-anthranilic, AX: xanturenic acid, OH-K: 3-OH- Kynurenine, AK: Kynurenic Acid, aMT: Melatonin, Trp: tryptophan.
CONCLUSIONS: 1.- Normal children showed a circadian variation in patterns of elimination of some of metabolites of tryptophan via the kynurenin pathway and a close correlation between theese and methoxy - indoles pathway. 3.- In the presence of convulsive crises this correlation disappears enterely probably because of the need to cover more demanding biological requirements and clearly modify the pattern of elimination of some Trp metabolites.

163 EPIDEMIOLOGICAL ANALYSIS OF THE PRE-MATURITY RISK FACTORS

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By means of complete registration applied in 9 hospitals of Southern Poland from May 1,1989 through December 31,1989 - 413 premature infants and 2919 control babies were ascertained. The study represents an attempt to identify prematurity risk factors and evaluate the degree of their contribution to the etiology of preterm delivery. **Results:** the overall incidence of prematurity was 4.4% (range: 3.1 -6.0%). The analyses performed by chi2 method revealed significant associations between prematurity occurrence and: increased number of miscarriages (MSC) (p = .0002); lower menarche age (MA) (p = .031), lower maternal education (ED) (p = .01), illegitimacy (IL) (p = .001), standing position at work (p = 4.24E-5). Possible interactions between the above mentioned risk factors were tested by Chi-Log analysis. The best goodness of fit (p = 0.867) between the observed and expected distributions of premature deliveries was found for three factors: IL, ED, MSC with significant contributions of the following interactions: IL:MSC, IL:ED. It was found that mothers of preterm babies weighted significantly less in comparison to the mothers of controls (p = .0009). No such relationship was observed for maternal height. An additional analysis was focused on familial occurrence of preterm deliveries. It was shown that incidence of prematurity among the probands' sibs was markedly higher compared to the sibs of term controls (p = 4.4E-13). **Conclusion:** The results suggest multifactorial etiology of prematurity with the involvement of environmental, maternal and possibly genetic factors.

164 RETINOBLASTOMA - FAMILIAL INCIDENCE, CYTOGENETIC STUDY AND SPINAL FLUID AND BONE MARROW EXAMINATIONS.

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From January 1989 through January 1990 a group of 51 children (25 boys and 26 girls) affected with retinoblastoma (Rb) were ascertained by means of a nation-wide referring system of this disease in Polish population. All children were diagnosed below 3 years of age. Bilateral tumors were observed in 28 cases, whereas 23 children were affected unilaterally. In 4 families additional four cases of Rb were found among the probands' parents (3) and sib (1). All affected children showed bilateral tumors. In addition, second degree relatives of 9 probands revealed other malignancies of mesenchymal origin known to be associated with Rb-1 chromosomal locus. Cytogenetic examinations performed in all familial cases revealed normal karyotypes among probands, their parents and sibs. In 20 probands spinal fluid and bone marrow aspirates were examined for early metastases as an attempt to define the indications for chemiotherapy. In only one case an increased percentage of blast cells indicating bone marrow metastases was observed. In two cases, the examination of spinal fluid revealed the macrophages with significant necrobiotic changes,but without any signs of neoplastic cells. **Conclusions:** 1. In addition to significant familial clustering, Rb reveals marked association with other mesenchymal tumors. 2. Familial as well as sporadic cases of Rb were not accompanied by interstitial deletion of chromosome 13. 3. Spinal fluid and bone marrow examinations might be of some value for the introduction of adjunct therapy for surgical treatment of Rb.

165 MOLECULAR ANALYSIS OF PKU HAPLOTYPES IN THE POPULATION OF SOUTHERN POLAND.

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Out of a population of 138598 infants born in Southern Poland between 1987 through 1989, and screend for PKU, 22 cases were ascertained. DNA from 22 probands and their parents was isolated from peripheral blood leukocytes. Eight restriction enzymes were used (Bgl II, Pvu II, Eco RI, Msp I, Xmn I, Hind III and Eco RV). Polymorphic restriction sites were analyzed with the cDNA probe pH PAH 247. The mutation of codon 408 (exon 12, C --- T, Arg --- Trp) was tested on amplified DNA by dot-blot hybridization with 32P - labeled allele -specific oligonucleotides. Eight RFLP sites of the PAH gene were defined in 88 parental chromosomes, revealing 21 different haplotypes (HT). Among those, 16 have been already described, 5 - represented the new ones. The most common HT among those carrying normal alleles were: HT1 (27.3%) and HT4 (11.4%). Within the group of HT with mutant allele the most frequent was HT2 (56.8%) whereas the frequency of the same HT in French, Danish and German populations ranged from 12% to 24%. HT3, being the most common in Danish (38%) and relatively frequent in other western European populations (13-14%) appeared to be very rare in our sample (2.3%). The mutation in codon 408 was found in 25 out of 44 probands' chromosomes. Only one mutation was carried by HT5, the remaining 24 were associated with HT2. Our results confirm molecular heterogeneity of PKU haplotypes, as well as their significant interpopulation variation.

166 TIME-PLACE CLUSTERS ANALYSIS FOR SELECTED CONGENITAL MALFORMATION IN SOUTHERN POLAND

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During the period of 1096 days (Jan. 1,87 through Dec. 31,89) 2508 children with: Neural tube defects NTD (217), congenital heart defects CHD (1076), cleft lip +/- palate CL+/-P (275), and limbs malformations LM (940) were ascertained. Three sources of selection were used: 1. Birth defects registry, 2. Death registry, 3. Institute of Pediatrics records. The major goal of the study was to asses the existence of time-place clusters of the above mentioned anomalies. For analysis of Ho hypothesis of random malformations' distribution, K-means algorithm implemented by Kamea package was used. The highest contribution for clusters formation was shown by LM (35%) and CHD (28%) and the lowest one for CL+/-P (12%) Significant clusters were characterized by: mean time per cluster 8.5, wks range: 7.7 wks (LM) - 12.2 wks (CL+/-P); mean surface area: 186 km^2, range: 133 km^2 (LM) - 290 km^2 (CHD). The mean malformation count per cluster was 7.3 and varied from 5.7 (CL+/-P) to 6.1 (NTD, LM). The most frequent time clusters were observed in March and June'87; May and December'88; January'89, whereas place clusters predominated in two industrial districts of Kraków (n = 43). **Conclusions:** 1. Different ability for birth defects clusters formation suggests different contribution of environmental factors to their etiology. 2. Cluster analysis may offer the rationale for future intervention study aiming at birth defects prevention.