524 INCREASED RATE OF HAEMOPHILUS INFLUENZAE INFECTION IN HAITIAN CHILDREN.

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The finding of an unusually high rate of Haemophilus influenzae (HFlu) bacteremia in Haitian children with sickle cell anemia led to speculation that they might comprise a population generally more susceptible to such infections. We reviewed all blood and spinal fluid cultures positive for HFlu for children under 5 for a 2 year period and found 71 occurred in H and 104 in American (A) children, a rate disproportionate to the ethnic composition of children seen in our Emergency Room. For 6 months, the race and nationality of all children seen were available. During that time positive cultures were found in 20/2026 (0.99%) H, a higher rate than that found in A children, 20/8335 (0.24%) $p<.01$. The rate was similar for both Black and White A children. There was no difference in age with 88% H and 80% A occurring before 2 years, nor was there a difference in infection site, underlying illness or outcome. Although the data do not allow calculation of a population incidence, they seem to indicate that H children in this community have more frequent serious infections with HFlu. Immunization should be provided but will be of uncertain benefit until a product is made available that is effective in the first year of life.

●525 THE INTERACTION OF IRON DEFICIENCY AND LEAD POISONING IN *NORMAL* CHILDREN. AN EPIDEMIOLOGICAL STUDY.

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In children the levels of erythrocyte porphyrins *(EP)* increase exponentially with the blood lead *(BPb)* above a threshold of 18 μg/dl (P.N.A.S. 79: 3335, 1982). The EP levels are also elevated by iron deficiency. This study was directed to assess the response of normal and Fe deficient children to low levels of Pb. In addition to BPb and EP, serum ferritin *(SF)* and mean corpuscular volume *(MCV)* were measured in 3459 children age 1 to 6 years. The normal range for SF and MCV were first established for each year of age. Children with SF $< 2\sigma$ below the mean or both SF and MCV $< 1\sigma$ below the mean were considered certainly Fe deficient; those with both SF and MCV $> 1\sigma$ below the mean were considered certainly Fe sufficient. Children who did not fulfill any of these criteria were left unclassified and excluded from the analysis. The threshold BPb for EP elevation was established by the segmented line technique. The threshold BPb for the entire group of 3459 children was 18 μg/dl; for the 331 Fe deficient children it was 12.5 μg/dl and for the 2314 Fe sufficient children it was 20.3 μ g/dl; all slopes of elevation were parallel. Because of the lower threshold BPb, Fe deficient children have a greater increase in EP in response to Pb than Fe sufficient children. These findings demonstrate the greater sensitivity of Fe deficient children to the effect of Pb, probably mediated by the competitive inhibition between Pb and Fe at the ferrochelatase step (Blood 66: 47a, 1985). Fe deficiency increases the sensitivity of children to Pb; Fe supplementation may protect them from the adverse effects of Pb on heme synthesis.

●526 NEWBORN HOSPITALIZATION: A CLOSER LOOK.

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To assess the safety of early newborn hospital discharge (mean ± SD, 32 ± 6 hours post delivery), among 808 well newborn infants, the incidence of hospital readmission within 6 weeks of birth was determined. This incidence was then compared to the incidence of readmission among a similar cohort (n=284) of well infants assigned prolonged newborn hospitalization (mean ± SD, 103 ± 54 hours) for maternal reasons. The hospital charts for all newborns admitted to the well baby nursery between January 1 and June 30, 1985 were reviewed. Twenty-two of the 808 (2.7%) early discharge infants and 8 of the 284 (2.8%) extended hospitalization infants were readmitted to the hospital by age six weeks. These readmission rates were not significantly (p=ns) different. Maternal age, financial status, and race each failed to predict infant readmission. Only two of the 22 readmission diagnoses observed among early discharged newborns potentially could have been identified (not prevented) prior to discharge with an extended newborn hospitalization. These data indicate that early neonatal hospital discharge does not result in an increased incidence of rehospitalization within the first six weeks of life.

527 CONGENITAL SYPHILIS (CS) IN AN URBAN POPULATION: A PREVENTABLE PROBLEM.

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National Surveillance data show an increase in CS from 1978 - 1985; 80% of this increase in 1985 was accounted for by N.Y. City and 3 states.

A prospective study was undertaken to determine factors that can help in preventing CS. Over a 21 month period, 119 (1.5%) of 8289 women that delivered at Lincoln Hospital were positive for STS. They and their infants were evaluated for STS and CS within 5 days. Subjects were classified into 3 groups: A) passive transfer, B) probable CS and C) definite CS. Only 3 mothers were younger than 18 years; 108 women had received prenatal care, though the majority of prenatal care was inadequate (< 3 visits) and sporadic. Syphilis is a notifiable disease, however, only 53 women were documented to have treatment followup.

	Number	No Prenatal Care	Awareness of Syphilis Yes	Awareness of Syphilis No	Maternal Treatment Before	Maternal Treatment During	Maternal Treatment After	Mothers' Followup Yes	Mothers' Followup No	Mothers' Followup NA
GP A	102	7	95	7	51	51	0	52	50	0
GP B	15	4	3	12	1	3	11	1	3	11
GP C	2	0	0	2	0	0	2	0	0	2
Total	119	11	98	21	52	54	13	53	53	13

Prevention of CS requires 1) early and quality prenatal care, 2) STS screening in 1st and 3rd trimester and 3) active involvement by public health authorities for treatment followup of mother and infant.

●528 A HIGHER WEIGHT SPECIFIC FETAL MORTALITY RATE (FMR) CAN EXPLAIN LOWER NEONATAL MORTALITY RATE (NMR) IN BLACK PREMATURE INFANTS:

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The low birth weight (LBW) neonatal mortality is known to be better in black than in white population, but the reasons are not clear. To test the hypothesis that a relatively high LBW fetal mortality might be occurring in black LBWs to explain the low NMR, we used a computerized regional perinatal data base, (Spellacy, AM.J.Ob Gyn.'84) and analyzed data from 65,387 births (1982-85). Standard perinatal vital rates weight specific FMR and NMR and their ratios, and log odds ratio of FMR at 250 g b wt intervals in 16,874 black, 35,966 white and 12,547 Hispanic births were analyzed. (Table). The black LBW NMR was significantly lower than white and Hispanic rates, but LBW-FMR/NMR ratio showed that for every 10 LBW neonatal deaths at 1.5-2.5Kg wt. range, (which forms 11.2% of black total births), there were 25 fetal deaths in blacks as compared to 12 fetal deaths in white and Hispanics. The log odds ratios of weight specific NMR models showed that the odds of FMR decreased exponentially with increasing weight in all races, but the slope in the black was 26% flatter, ($p<0.01$). Because of high LBW rate in the blacks, a higher risk of LBW black FMR can explain why their LBW-NMR is better: A relatively large fraction of black LBW fetuses simply die before birth. (*Black rates significantly different from white and Hispanic rates: Chi square for independent proportions: $p<0.05$)

Race	LBW%	LBWFMR	LBWNMR	FMR/NMR RATIOS ALL	1.5	1.5-2.5	2.5
Black	13.6	40*	49.3*	1.03	0.54	2.47*	2.27
White	6.9	51	64	1.06	0.6	1.2	2.38
Hisp.	5.8	48	65	1.01	0.65	1.2	2.25

529 NURSING BOTTLE WEANING: MATERNAL PERSPECTIVES

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Numerous studies have documented the deleterious effects of prolonged bottle feeding in children. Little information exists regarding the optimal age for terminating bottle feedings, what advice pediatricians provide to parents, and what methods parents employ for bottle weaning. Information about bottle weaning practices was gathered from 172 mothers with bottle-fed children between the ages of 2 and 5 years ($\bar{x}$ = 42 mos.) scheduled for pediatric clinic visits. SES ranged from lower to upper middle, with 75% falling in the lower middle and lower categories. Forty percent of mothers reported pediatricians as the primary care provider. Although the mean recommended age for weaning was 7 months, the average age for attainment of daytime bottle weaning was 14 months. Seventy-one percent of mothers reported that bedtime bottle feeding practices were not discussed by their physicians. Forty-five percent of children were allowed to sleep with the bottle, which contained milk in 27% of the cases. Two weaning methods were commonly reported: (1) gradual reduction of the number of bottles (42%) and (2) abrupt termination (38%). Only 11% of mothers cited physicians as the primary source of information on nursing bottle weaning, with 36% relying on instinctual judgement. Data suggest pediatricians need to include explicit information on the timing of and methods for cessation of bottle feeding as part of anticipatory guidance interventions.