

A Study of the Extent to which Maternal Nutrition after Delivery Reflects the Situation in Early Pregnancy.

I. LECK, CYNTHIA A. ILES, I. M. SHARMAN, T. TOE, and G. R. WADSWORTH (*Department of Community Medicine, University of Manchester; Medical Unit, University College Hospital Medical School; Dunn Nutritional Laboratory, M R C, and University of Cambridge; and Department of Human Nutrition, London School of Hygiene and Tropical Medicine*)

The feasibility of using data collected during the puerperium or several months after delivery to identify women whose diet or nutrition in early pregnancy may have been abnormal was tested by studies carried out on 168 patients of a London obstetric unit. Blood samples were obtained from all 168 women when they registered there; from 139 during the puerperium; and from 103 twelve months after registration; 142 of the women kept dietary diaries for a week immediately after registration, and 108 did so twelve months later.

As previous work suggests that abnormal levels of vitamin A and folate may predispose to malformations, priority has been given to testing for correlations between dietary and serum vitamin A and serum carotenoids, and between dietary free folate, serum folate, and erythrocyte folate. The results suggest that one cannot learn much about blood levels of these substances in early pregnancy from the diet a year later, nor even from puerperal blood levels (except for serum carotenoids, for which the correlation coefficient between puerperium and early pregnancy was over 0.5). The correlation coefficients between the final blood levels and those in early pregnancy were, however, above 0.5 for erythrocyte folate as well as for serum carotenoids, and in the case of each of these variables nearly half the women whose final levels were more than one standard deviation above or below the mean had initial levels like this also.

On these criteria, 12 women had persistently low erythrocyte folate or serum carotenoid levels. Three of these women, but none of the other 91 whose final blood levels were known, produced children with malformations of embryonic origin during or before the study.

Incidence of Anencephalus and Spina Bifida and Variation in Risks according to Parental Birthplaces in Three Australian States. M. S. T. HOBBS, A. CARNEY, B. FIELD, D. SIMPSON, and C. KERR (*University of Western Australia*)

The incidence of anencephalus and spina bifida cystica in the Australian States of New South Wales, South Australia, and Western Australia for the period 1966-67 has been estimated from perinatal death certificates, death certificates, and hospital records. No significant variation between the States has been found. The combined incidence for both abnormalities for the three States together was 2 per 1,000 births, confirming suggestions from previous studies that Australia has a relatively low risk of CNS malformations compared with the British Isles.

For spina bifida the risk in couples where both parents were born in the British Isles was significantly greater than for Australian-born couples. In contrast, the risk

for other European-born couples was significantly less than for either British-born or Australian couples. However, no difference in risk was observed between Australian-born couples and couples where only one parent of either sex was an immigrant. For anencephaly similar but less pronounced trends were observed.

Migrant couples thus have a risk of anencephaly and spina bifida similar to that prevailing in their country of origin rather than their country of adoption, whereas the reverse appears to be true for migrants of either sex married to an Australian. As the former are likely to have entered Australia later in life, frequently after marriage, than migrants married to Australians, it is suggested that this difference may be due to environmental influences which diminish according to duration of residence in Australia.

Cyclic Variation of Obstetric Phenomena in Cardiff. C. J. ROBERTS and SOSTUKO LLOYD (*Department of Social and Occupational Medicine, Welsh National School of Medicine, Cardiff*)

This paper analyses the cyclic behaviour of 16 categories of obstetric complication and is based on all births in Cardiff in 1965-69.

Of the 16 categories of obstetric complication studied, namely essential hypertension, mild toxæmia, severe toxæmia, threatened abortion, placenta prævia, accidental haemorrhage, other antepartum haemorrhage, hyperemesis, hydramnios, unstable lie, premature rupture of membranes, uterine anomalies, glycosuria, albuminuria, anaemia, and post-partum psychosis, only two (essential hypertension and post-partum psychosis) showed cyclic behaviour.

The absence of cyclic fluctuation in toxæmia supports the view that the condition is entirely pregnancy initiated. The marked cyclic pattern of essential hypertension supports earlier suggestions that blood pressure has a seasonal fluctuation. The cyclic behaviour of post-partum psychosis suggests that this condition is not entirely pregnancy initiated but is under the influence of something which is associated with the perceptible environment. The implications of these findings in terms of causality and prevention are discussed in the context both of obstetric management and of possible broader implications in the aetiology of the hypertension related diseases—in particular ischaemic heart disease and cerebrovascular disease.

Henoch-Schönlein Purpura in Southampton. S. ATKINSON and D. J. P. BARKER (*Division of Community Medicine, University of Southampton*)

In most cases of Henoch-Schönlein purpura the cause of the disease is unknown. It has been suggested that hypersensitivity to haemolytic streptococcal throat infection may be an aetiological factor. However, in only 33% of 76 patients admitted to Southampton Children's Hospital was there evidence of recent streptococcal infection, and only 17% of throat swabs taken from patients yielded haemolytic streptococci, compared with 9.6% of swabs from a control group. The seasonal