This is about a time and place when there was no immigrant community, no foreign travel other than war-service and no imported vegetables: they were all grown locally.

T. P. EDDY
18 Denmark Villas,
Hove,
East Sussex,
BN3 3TE, England

References

Denham, D. A. (1984). *Ascaris lumbricoides* in English schoolchildren. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, **78**, 566-567.

Eaton, R. D. P. (1985). *Ascaris lumbricoides* in Canada: a reply to Dr. Denham. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, **79**, 142.

Willcox, M. C. (1985). *Ascaris lumbricoides* in Sweden: a reply to Dr. Denham. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, **79**, 142.

Accepted for publication 3rd May, 1985.

Sickle cell trait and *Plasmodium falciparum* parasitaemia in pregnancy in Western Province, Kenya

In holoendemic malaria areas it is thought that women have attained levels of immunity against *Plasmodium falciparum* infection at which sickle cell trait (HbAS) confers no advantage (CORNILLE-BROGGER *et al.*, 1979). However, during pregnancy, *P. falciparum* prevalence is increased, particularly early in gestation (BRABIN, 1983). Therefore it seemed of interest to determine if HbAS exerts a control on the degree of parasitaemia observed during pregnancy. A micromethod for cellulose acetate electrophoresis (KOHN, 1969) was applied to the study of 214 samples of packed red cells (frozen haematocrit samples) collected from pregnant women with no history of previous antimalarial prophylaxis attending a rural antenatal clinic in Western Province, Kenya, in a holoendemic malaria area (Nangina Hospital).

Thick drop blood smears were stained by Giemsa stain and haematocrit samples and leucocyte counts were prepared on all women from venepuncture blood collected at the first ante-natal visit. Parasite density per mm^3 was calculated by counting the number of parasites per 200 leucocytes, and correcting this figure against the individual's own leucocyte count per mm^3. 44% of HbAS women were primigravidae compared to 48% of HbAA subjects. Women received chloroquine (5 mg/kg base) as prophylaxis at each ante-natal visit. 10 µl of packed red cells lysed by freezing was applied on acetate cellulose membrane (Beckmann) and electrophoresed using a microzone cell (KOHN, 1969).

Over-all, 66 (30·8%) of 214 haematocrit samples were positive for HbAS. The prevalence of *P. falciparum* infection decreases with advancing gestation in HbAS and HbAA subjects. Peak prevalence occurred before 24 weeks gestation in both groups and no significant differences in prevalence or parasite density occurred for a given gestational period between HbAS and HbAA subjects (Table I).

Support for analyses was received from the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases.

BERNARD J. BRABIN[1]
LUC PERRIN[2]
[1]*Papua New Guinea Institute of Medical Research, P.O. Box 378, Madang.*
[2]*Dept. of Medicine, Université Hôpital Cantonal, Geneva, Switzerland.*

References

Brabin, B. J. (1983). An analysis of malaria in pregnancy in Africa. *Bulletin of the World Health Organization*, **61**, 1005-1016.

Cornille-Brogger, R., Fleming, A. F., Kagan, I., Matsushima, T. & Molineaux, L. (1979). Abnormal haemaglobins in the Sudan savanna of Nigeria. II. Immunological response to malaria in normals and subjects with sickle cell trait. *Annals of Tropical Medicine and Parasitology*, **73**, 173-183.

Kohn, J. (1969). Separation of haemoglobins on cellulose acetate. *Journal of Clinical Pathology*, **22**, 109-111.

Table I—Gestational differences in *P. falciparum* parasite rate (%) and density (log_{10} parasites mm^3 ± SD) in HbAA and HbAS subjects at their first antenatal visit

Gestational age (wks)	8-16	17-24	25-32	33-40	Over-all
HbAA					
Parasite rate	60·0 (15)	62·0 (44)	40·9)18)	12·5 (1)	52·7 (78)
Parasite density	2·9 ± 0·8 (15)	3·0 ± 0·8 (43)	2·9 ± 1·0 (17)	2·4 (1)	3·0 ± 0·8 (76)
HbAS					
Parasite rate	70·0 (7)	58·3 (14)	35·7 (10)	25·0 (1)	48·5 (32)
Parasite density	3·1 ± 0·9 (7)	2·8 ± 0·6 (13)	3·5 ± 0·9 (10)	2·6 (1)	3·1 ± 0·8 (31)

Parentheses: numbers with positive blood smears.

Accepted for publication 19th April, 1985.