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Toxoplasma antibodies in the sera of immigrants to the United Kingdom from Asia and East Africa

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SUMMARY

Sera from 203 Asian immigrants to the United Kingdom were examined for toxoplasma antibodies. The antibody titres were not significantly different from those found in the indigenous population although there was some indication that a higher domestic animal–human contact in Asia was associated with a higher positivity rate.

INTRODUCTION

Ludlam, Wong & Field (1969) noted the low positivity rate for toxoplasma antibodies in sera from Hong Kong, and quoted papers indicating a low rate generally in the Far East. Blood samples were being collected from Asian immigrants (Indians and Pakistanis) who were attending a health screening clinic in Bradford, Yorkshire. A series of serum samples from this group were examined for toxoplasma antibodies by the Sabin–Fieldman dye test. The patients whose sera were so examined did not differ from the patients not tested for those antibodies; the group examined in this series comprised two separate consecutive groups of patients, each of about 100, attending the screening clinic.

RESULTS

A total of 203 sera were examined by the Sabin–Fieldman dye test, 123 from men and 80 from women. Results are shown in Table 1. Twenty-nine of the men (23·6 %) and 26 of the women (32·5 %) gave a positive titre of over 1/8. Two young men aged between 16–25 years had a positive titre of 1/512. Four women aged between 16 and 35 had a positive titre of 1/512 or over; two of them had a titre of 1/1024 and one titre of 1/2048. No clinical details of these four women are to hand.

Although there is no significant difference between the sexes in the total results for all ages, there is a significant difference in the 26–45 age group where there is a higher rate in women. If the natural sources of the infection are domestic animals, this difference is probably the result of a closer human–domestic animal contact in the housewife as compared to the male member of the household. There was a higher incidence of positive reactions in men who had been farmers before migration compared to those who had been in other occupations. (27 % compared to 20 %): this difference was not large enough to be significant at the 0·05 % level ($P = 0{\cdot}3$).

Table 1. *Asian immigrants: examination of sera for toxoplasma antibodies*

(Percentages given in parentheses.)

Age	Sex	No. examined	Negative	Positive in titre: 1/8 and above	1/32 and above	1/128 and above
11–15	M	8	5 (62·5)	3 (37·5)	2 (25·0)	1 (12·5)
	F	1	1 (100·0)	0 (–)	0 (—)	0 (—)
	Total	9	6 (66·7)	3 (33·3)	2 (22·2)	1 (11·1)
16–25	M	43	36 (83·7)	7 (16·3)	5 (11·6)	4 (9·3)
	F	36	28 (77·8)	8 (22·2)	7 (19·4)	6 (16·7)
	Total	79	64 (81·0)	15 (19·0)	12 (15·2)	10 (12·7)
26–45	M	53	41 (77·4)	12 (22·6)	7 (13·2)	2 (3·8)
	F	34	19 (55·9)	15 (44·1)	9 (26·5)	5 (14·7)
	Total	87	60 (69·0)	27 (31·0)	16 (18·4)	7 (8·0)
46+	M	19	12 (63·2)	7 (36·8)	5 (26·3)	2 (10·5)
	F	9	6 (66·7)	3 (33·3)	2 (22·2)	0 (–)
	Total	28	18 (64·3)	10 (35·7)	7 (25·0)	2 (7·1)
Total	M	123	94 (76·4)	29 (23·6)	19 (15·4)	9 (7·3)
	F	80	54 (67·5)	26 (32·5)	18 (22·5)	11 (13·7)
	Total	203	148 (72·9)	55 (27·1)	37 (18·2)	20 (9·9)

Table 2. *Asian immigrants: both sexes; toxoplasma antibody rates according to country of last residence*

(Percentages given in parentheses.)

Country of last residence	No. examined	No. positive at a titre of: 1/8 and above	1/16 and above
Azad Kashmir	68	20 (29·4)	15 (22·1)
West Pakistan	38	4 (10·5)	4 (10·5)
East Pakistan	22	6 (27·3)	5 (22·7)
India	57	15 (26·3)	13 (22·8)
East Africa	17	10 (58·8)	9 (52·9)
Other	1	0	0
Total	203	55 (27·1)	46 (22·7)

Table 2 shows the variation in the antibody rates when grouped according to the immigrants' country of origin. There is some difference between these rates, and the rate in those from East Africa is significantly higher than the combined rate in those from the Indian sub-continent. This difference is not significantly affected by differences in the age/sex distribution in these groups.

In Britain 21 % of blood donors aged 21–30 gave a positive titre of 1/16 or more; in the age group 31–40 the figure is 30 %, and for 41–50, 40 % (Fleck 1969). The rates from this group of immigrants examined are illustrated in Fig. 1, grouped to compare with the U.K. rates: they are somewhat lower than the latter rates but are within the range of rates found in nine areas in England and Wales by Fleck (1969).

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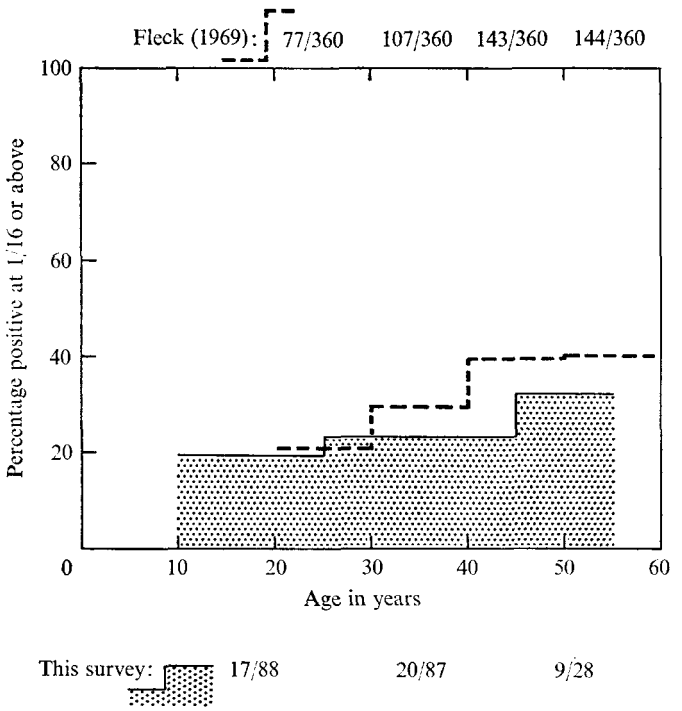

Fig. 1. Dye test on sera from Asian immigrants in Bradford, England.

It is considered that the results obtained in this survey indicate that toxoplasmosis would not be a significant imported disease in immigrants of Asian origin from India, Pakistan or East Africa and that no special examination of this group of the population is required in this respect.

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