

THE INCIDENCE OF TOXOPLASMOSIS IN A GROUP OF IDIOPATHIC EPILEPSY IN IRAQ*)

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Abstract. Toxoplasmin intradermal test was carried out on 101 patients with idiopathic epilepsy. Positive results were obtained in 14.8% of the patients tested. There seems to be no direct evidence that toxoplasmosis plays a role in the etiology of idiopathic epilepsy.

Epileptic fits are considered as one of the frequent signs of congenital toxoplasmosis. In a study by ELIAS et al. (1960) on children, he found 26.7% positive results in epileptic children while positive results in healthy controls were only 10.3%. THALHAMMER (1962) studied congenital toxoplasmosis and found that the incidence in those with epilepsy or mental retardation was seven times higher than in the control group.

LUPASCU et al. (1963) investigated various groups of population by means of intradermal toxoplasmin test and found that the positive reaction was 17.3% among 27 epileptic children. The age of this group ranged from 1-14 years, while he found 0% in 19 healthy adults.

Since idiopathic epilepsy starts in early childhood and in adolescence predominantly and continues onwards through the patient's life, this work has been done to assess the relation between idiopathic epilepsy and toxoplasmosis and whether *Toxoplasma gondii* plays a role as an etiological factor in idiopathic epilepsy. The toxoplasmin intradermal test was used for this purpose.

MATERIAL AND METHODS

The present work was carried out in November through December 1964, and 101 epileptic patients (56 males and 45 females) were tested.

Ninety three patients (54 males and 39 females) were from Shammaaya Hospital (this is the principal hospital for neuropsychiatric diseases in Baghdad). Patients were from various parts of the

*) Sensitivity of Iraqis to the Toxoplasmin Intradermal Test. Part IV.

Table I. Incidence of toxoplasmosis in a group of idiopathic epileptics. Distribution of the cases according to age groups.

Age group in years	Male		Female		Total number	Positive cases
	Negative	Positive	Negative	Positive		
8	0	0	1	0	1	0
9-14	2	0	0	0	2	0
15-19	4	0	2	1	7	1
20-24	10	0	8	1	19	1
25-29	8	0	8	1	17	1
30-34	8	0	9	4	21	4
35-39	13	3	4	1	21	4
40-44	5	1	2	0	8	1
45-49	0	0	0	1	1	1
50-54	0	0	1	1	2	1
55-59	1	1	0	0	2	1
TOTAL	51	5 (8.9 %)	35	10 (22.2 %)	101	15 (14.8 %)

country, the majority being from the district of Baghdad. The remaining eight patients (2 males and 6 females) were from the Neurological department of the Republican Hospital of the University of Baghdad, all of which (except one) were from the city of Baghdad.

The living conditions of all the patients were among the lower middle and upper poor class except for few patients with moderately good living conditions.

The age of the patients tested ranged from 8 to 59 years (Table 1). X-ray examinations of the skull have been carried out for all the patients as the intradermal test was done.

The method used in this test is the same as in the previous work on Iraqis (NAJIM and AL-SAFFAR 1961, 1963) and (AL-SAFFAR and NAJIM 1965). The toxoplasmin antigen was kindly supplied by Prof. Jírovec of Prague.

All the patients were diagnosed and confirmed as idiopathic epilepsy, this was done by carrying out the various investigations needed to exclude all causes of symptomatic (secondary) epilepsy, all of which were negative.

RESULTS

Of the 101 epileptic patients tested, 15 gave positive results i.e. 14.8 %. Classified according to sex, there were five positive males out of 56 (i.e. 8.9 %) and ten positive females out of 45 (i.e. 22.2 %). Of the females, one was strong positive and two weak positive, the rest were positive. The males were all positive.

The age distribution for the whole group and the results of the test are presented in Table 1.

None of the whole group of patients had shown positive skull findings on X-ray examinations.

DISCUSSION AND CONCLUSION

The percentage of positive cases obtained as a result of the present study is rather low as compared to those for the normal Iraqi population previously obtained

(20.5 %, NAJIM and AL-SAFFAR 1961). According to sex, the present results seem to be even lower as compared to those of the normal males (20 %), but rather similar to those of the normal females (21 %) (NAJIM AL-SAFFAR 1961). From Table 1, the distribution of the present results among age groups seems to be rather similar to the distribution of age groups for the normal Iraqis (NAJIM and AL-SAFFAR 1961).

The results obtained and mentioned in this test, do not coincide with those presented by THALHAMMER (1962) and by LUPASCO et al. (1963) as compared to their own work on normal people. But they rather coincide with the results obtained by ROBERTSON (1965) on different age groups of epileptics and comparing them with his results on different age groups of normals. Our results of the present test do not show much correlation between idiopathic epilepsy and toxoplasmosis in this group of patients tested.

Furthermore, the negative X-ray findings of skull in all the patients who had positive toxoplasmin test may help to exclude their affection by congenital toxoplasmosis and may confirm that the Toxoplasma infection had happened later in their life.

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