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SOME ASPECTS OF TOXOPLASMOSIS IN GYNAECOLOGY IN IRAQ*)

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Abstract. Amongst 206 Iraqi women with abortion, stillbirths, threatened abortion, toxaemia of pregnancy and others, 22.8% reacted positively. Of the 84 women with normal pregnancy the percentage of positive cases was 16.6%.

If this result is considered with that of a previous work (1961), it will support the findings that toxoplasmosis may play a role in causing abortion, stillbirths or other perinatal mortality.

Congenital toxoplasmosis and especially the relation between *Toxoplasma* infection and perinatal mortality have attracted the attention of many workers. Some believe that women who had a history of abortions or various types of perinatal mortality show more frequent antibodies than normal women. On the other hand, there are workers who could not prove that *Toxoplasma* is a common cause of abortion, perinatal mortality. The literature on this problem was aptly reviewed till 1964 by BEATTIE in his valuable lecture (The Lister Fellowship Lecture). BABBAGE (1965) reported the possibility of epidemic miscarriage caused by *Toxoplasma gondii*.

MATERIAL AND METHOD

This test was carried out in the maternity ward of the Republican Hospital in Baghdad. The hospital represents the cross section of the greater part of the Iraqi community (the middle and lower classes), and it is at the same time the University hospital.

A total of 290 women were tested (Tab. 1). They were, 84 with normal pregnancy, (Tab. 2), 160 with threatened abortion, 21 with abortions and stillbirths, 17 with toxaemia of pregnancy and 8 others (5 hydramnios, 2 ectopic gestation and 1 premature labour) (Tab.3).

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

Table 1. Distribution of the cases according to age groups

Age groups	(+) cases	(—) cases	Total	Percentage of (+) cases
15—19	3	29	32	9.4 %
20—24	9	43	52	17.3 %
25—29	17	56	73	23.3 %
30—34	21	66	87	24.1 %
35—39	10	30	40	25 %
40—44	1	5	6	16.6 %
Total	61	229	290	21 %

Table 2. The age distribution of normal pregnancy group in this survey

Age groups	(+) cases	(—) cases	Total	Percentage of normal pregnancy
15—19	—	12	12	0. %
20—24	4	10	14	28.6 %
25—29	3	17	20	15 %
30—34	4	23	27	14.8 %
35—39	3	7	10	30 %
40—44	—	1	1	0. %
Total	14	70	84	16.6 %

Table 3. Age group of abortion threatened abortion and others

Age groups	(+) cases	(—) cases	Total	Percentage of (+) cases
15—19	3	17	20	15 %
20—24	5	33	38	13.1 %
25—29	14	39	53	26.4 %
30—34	17	43	60	28.3 %
35—39	7	23	30	23.3 %
40—44	1	4	5	20 %
Total	47	159	206	22.8 %

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

RESULTS

Of the 84 women with normal pregnancy, 14 reacted positively (9 strong positive and 5 weak positive). The percentage of positive cases is 16.6 %. Out of the 206 women with abortion, stillbirth, threatened abortion, toxaemia of pregnancy and others, 47 reacted positively (24 weak positive and 23 strong positive) i.e. the percentage of positive cases is 22.8 %.

Among the 181 women with threatened abortion, abortion and stillbirths, 44 reacted positively (23 weak positive and 21 strong positive) i.e. 24.3 %.

DISCUSSION AND CONCLUSION

The question of the effects of *Toxoplasma* on mothers experiencing abortion or stillbirths has not been settled yet. NEGHME et al. (1952) found *Toxoplasma* in the placenta of two women with histories of previous abortions. LANGER and GEISSLER (1960) have presented a series of cases in which they claim to have demonstrated *Toxoplasma* parasites in menstrual blood and lochia from women with repeated abortions, stillbirths or premature births. WERNER et al. (1963) concluded that abortion, stillbirth and malformation can be caused by cysts which have been latent in the endometrium. They may do so either by infecting the embryo or, more commonly, by producing an endometritis which interferes with the development of the embryo. REMINGTON et al. (1964) reported the isolation of *Toxoplasma* from specimens obtained from two women who had spontaneous abortions. Furthermore, the possibility that *Toxoplasma* can produce an epidemic miscarriage among women has been reported by BABBAGE (1965).

As to the relation between the intradermal test results and the various perinatal mortality, it has been found by ČECH and JÍROVEC (1960 quoted BEATTIE 1964) that positive skin test is much more frequent in such a group of women than in normal ones and they further reported that anti *Toxoplasma* therapy has resulted in improvement.

On the other hand, there are reports on maternal infection during pregnancy being followed by the birth of a normal child (GARD and MAGNUSSON 1951; STANTON and PINKERTON 1953). In both reports, the mother's infection was early in pregnancy. Also other studies on *Toxoplasma* antibodies in mothers with abortions and stillbirths have revealed no differences between these women and those who gave birth normally (HOLMDAHL 1953; VIVELL and BUHN 1953). Furthermore, many other workers such as SABIN et al. (1952), ESSBACH (1962) and THALHAMMER (1962) could not prove the positive relation between toxoplasmosis and abortion.

If we compare the positive results of the present test on the women with normal pregnancy (16.6 %) with the results of those women with threatened abortion, stillbirth, toxaemia of pregnancy and others (22.8 %), the difference is definitly in favour of the effect of toxoplasmosis on perinatal mortality. Comparing the present results with those obtained from our test of 1961 on normal Iraqi in general,

the difference does not seem at first significant. However, if we take in consideration the 32 women in the 1961 test who had a history of abortion and the positive cases among that group (i.e. 13 women reacted positively), the results will, in general, coincide with the conclusions that toxoplasmosis may play a role in causing abortion, stillbirth or other perinatal mortality.

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