

## INCIDENCE OF TOXOPLASMOSIS IN CASES OF BAD OBSTETRIC HISTORY

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### SUMMARY

A total of 150 cases including 100 cases of Bad Obstetric history and 50 controlled cases were studied for toxoplasmosis in cases of bad obstetrical history in this region was 27%, while in control group it was 2%. Maximum positive cases were found in age group of 21-30 years. There was an almost equal incidence of positive cases in rural and urban population. Positive cases were more in nonvegetarians and in patients who had h/o contact with cats. The IFAT positivity was 26.2% in abortion cases, 30.7% in patients with h/o premature labour, 25% in cases with h/o still birth and 33.3% in cases with h/o congenital malformation. Pregnancy outcome was excellent (90%) after treatment in these cases.

### INTRODUCTION

The role of Toxoplasmosis as a cause of pregnancy losses has been proved by various authors. There are several reports in literature including that of Remington et al (1964) and Pal et al (1975). They have proved a significant correlation of abnormal outcome of pregnancy in the form of premature labour, still birth, neonatal death and congenital abnormality with a high Toxoplasma antibody titre in mother.

There are various methods of diagnosing Toxoplasmosis :-

- 1) Direct test - Demonstration of Toxoplasma by histopathological examination.
- 2) Indirect tests - Compliment fixation tests, Toxoplasmin test of Frankel, Sabin Feldman dye test, Indirect Haemagglutination test (IHA), Indirect Fluorescent Antibody test (IFA), Radioimmunoassay test.

Indirect Fluorescent antibody test (IFAT) introduced by Goldman (1957) is one of the best test and is sensitive up to 95%. We used the same method in our study.

The aim of the present work was to

study the incidence of Toxoplasmosis in cases with bad obstetric history so that they can be treated properly in time to reduce pregnancy losses.

#### MATERIAL AND METHOD

A total of 150 cases were selected for the present study, 50 were control and 100 were with bad obstetric history. The distribution is shown in Table I.

Indirect Fluorescent antibody test (IFAT) was used in our study. The Toxotest kit was obtained from Micro-biological Research Corp. Bountiful, Utah 84019, USA. The procedure adopted was as per Toxo test kit recommendation detecting Immunoglobulin G antibodies for Toxoplasma Gondii. The antibody titre at 1 : 16 was taken as positive. Positive cases were further diluted to know the end titre.

#### OBSERVATION

The present work comprises of study of 150 cases, 50 control and 100 test group. The age group of patients ranged from 16-40 years and included cases from all socio-economic level. Total 28 cases were found to be positive, 27 (27%) were from test group and

one (2%) was from control group. Maximum number of IFAT positive cases were found in age group 21-30 years in test group (28.8%). Equal incidences of positive cases were found in rural and urban population (28.5% and 26.15%). Incidence of positive cases were more in nonvegetarian (34.28%) than vegetarian (13.5%). Positive cases were more amongst those who were in contact with cat (30.4%) than those who were not in contact with cat (18.8%).

#### Frequency of positive cases in various reproductive disorders

##### Abortion

Out of 61 cases of abortion 16 (26.2%) were IFAT positive. The distribution in different types of abortion is shown in Table II.

##### Premature labour

Out of 13 cases of premature labour 4 (30.7%) were positive (Table II).

##### Still birth

Out of 20 cases of still birth 5 (25%) were positive (Table II).

##### Congenital malformation

Out of 6 cases, 2 (33.3%) were positive (Table II).

##### Clinical follow up of 27 cases

All the 27 cases who were positive for toxoplasma were given Orisul or Sulfadiazine during pregnancy for 3 weeks. Only 10 cases could be followed up. Outcome of these 10 cases was excellent after treatment as shown in Table III.

#### DISCUSSION

The infection of Toxoplasmosis in pregnancy can cause reproductive disorders and damage to the foetus. The incidence of

Table I

#### Distribution of Cases Studied

Type of cases	No.
Control group	50
Test group	100
- Abortion	61
- Still birth	20
- Premature labour	13
- Congenital malformation	6
Total	150

Table II

## Distribution frequency of IFAT titres in reproductive disorders

Bad obstetric history	Total No. of Cases	IFAT Positive No.	%	Titres						
				1 : 16	1 : 32	1 : 64	1 : 128	1 : 256	1 : 512	1 : 1024
Abortion	61	16	26.2	1	5	—	5	—	3	2
Habitual	14	4	28.5	—	1	—	2	—	—	1
Threatened	28	7	25.0	1	2	—	2	—	2	—
Inevitable	19	5	36.4	—	2	—	1	—	2	1
Premature labour	13	4	30.7	—	1	—	1	—	2	—
Still birth	20	5	25.0	1	2	—	—	1	—	1
Congenital malformation	6	2	33.3	1	—	—	—	—	1	—
<b>Total</b>	<b>100</b>	<b>27</b>	<b>27.0</b>							

Table III

## Clinical follow up of 10 Positive Cases

Diagnosis	No. of Cases	Preg. Outcome
h/o Still birth	5	FTND - 5
Habitual abortion	4	FTND - 3 --Premature del. - 1
Congenital malformation	1	FTND - 1

Toxoplasma was found to be fairly high (27%) in test group. This result is in concurrence with Panigrahi et al (1978) who showed a positivity of 27.3% by IFA test. In contrast Hingorani (1966) and Prem Singh et al (1980) have reported lower positivity, 16.3% and 16.5 respectively. Pal and Aggarwal (1979) reported much lower incidence (1.4%). In control group positivity was only 2%, which is in approximation with 4.2% positivity reported by Prem Singh et al (1980). Rawal (1959) has reported higher incidence in test group (19.11%).

Maximum seropositive cases were seen in third decade, this is concurrent with results of Hingorani (1966) who studied 90 cases in age group of 17-38 yrs. Pal (1981) reported maximum cases in second decade of life. There was an almost equal incidence of positive cases in rural and urban population. In present study the incidence of positive cases were more common (34.2%) in nonvegetarian which is in contrast

with those of Rawal (1959). Positivity was high (30.4%) in cases who had h/o contact with cat which is in contrast with that of Pal et al (1975).

The present sample of 100 cases contained 61 cases of abortion, 13 of premature labour, 20 of still birth and 6 of congenital malformation. The percentage positivity in above group was observed as 26.2%, 30.7%, 25% and 33.3% respectively. This is in concurrence with finding of Pal et al (1975) showing positivity rate of 20.22%, 24.2%, 25% and 33.3% respectively.

Of 10 cases who could be followed up it was found that most of them (90%) responded to medical treatment and had normal delivery. So it can be concluded that Toxoplasma could have been the chief cause of bad obstetric history in these cases. Hingorani also found better response in positive cases after therapy.

In view of high incidence of positivity and good response to treatment it is recommended that all antenatal patients should be screened for Toxoplasmosis.

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