

Maternal toxoplasmosis in repeated pregnancy loss

K A Yelikar • S. S. Bhat

Dept. of Obs. and Gyn. Government Medical College, Aurangabad 431 001 (MS)

Summary: A total 150 patients coming to Government Medical College and Hospital, Aurangabad for 2 years from September 1992 to September 1994 were screened for Toxoplasma IgM (Toxo IgM). The purpose of this study was to study the incidence of toxoplasma infection in cases of bad obstetric history patients, where all other causes of BOH were ruled out, to compare the titres in control group and study group.

Study group comprised of 120 pregnant women with bad obstetric history. Group II of 30 women with history of normal delivery acted as control group. The incidence of toxo IgM in BOH cases were 16.67% as compared to 3.33% in the control group. Since this was a pilot study at our hospital the therapy part was not included in the study. The high incidence of seropositivity in repeated pregnancy loss denotes that this infection may be responsible for foetal wastage. Improved techniques for laboratory diagnosis and therapy should form the future study, in order to avoid many a foetal wastage.

Introduction :

The significant role, infections, belonging to the TORCH group, play in causation of prenatal / perinatal insults is well established. Toxoplasmosis contributes to recurrent pregnancy losses and stupendous waste of life. The prevalence rate of Toxoplasmosis ranges from 5% to 75% in different parts of the world. This study was designed to find out the incidence of toxoplasmosis in women with Repeated Pregnancy loss in the form of abortions, preterm births, stillbirths, neonatal deaths and congenital anomalies.

Available literature reveals that no such work has been carried out in the Marathwada region of interior Maharashtra. The present study wanted to ascertain whether the problem of toxoplasmosis exists in the women attending ANC and indoor patients of the obstetric and gynaec department of the local hospital.

Aims and Objectives :

1. To study the incidence of toxoplasma infection in cases of Repeated Pregnancy loss.
2. To compare the antitoxoplasma antibody titres in control group and study group.

Material and Methods :

The present study was carried out over a period between September 1992 to September 1994 in the Department of Obstetrics and Gynaecology, Government Medical College and Hospital, Aurangabad.

In the present study 150 blood samples from mothers were collected and sent for antitoxoplasma IgM antibodies.

Out of these 150, patients Study group comprised of 120 cases. This included women who had foetal wastage in the form of abortions, stillbirths, preterm deliveries, con-

genital malformations. Control Group included 30 women with three or more normal pregnancies with no foetal wastage. Routine tests were performed to exclude other commonly known etiological factors of foetal losses. Rheumatoid factor test was done on all sera showing positive IgM antibodies to rule out false positivity. This was done by Latex agglutination test (Span diagnostics) as advised by the manufacturer.

Results and Discussion :

The present work consisted of two groups of patients. 120 were study group i.e. patients with Repeated Pregnancy loss and 30 were control group i.e. having all previous full term normal deliveries. Out of 120 patients, 20 were seropositive for IgM antibody for toxoplasma gondii. Giving an incidence of 16.67% and control group showed an incidence of 3.33% of seropositivity. This is depicted in Table No. 1.

Table - 1

Showing Prevalence of Toxo IgM Antibodies Among Cases in two groups.

Group	No. of Sera tested	Positive Sera	Percentage
I (Study Group)	120	20	16.67%
II (Control Group)	30	01	03.33%

This definitely indicates a higher incidence of seropositivity in Repeated Pregnancy loss patients.

Clinical presentations of patients in study group comprised of habitual abortions, preterm births, stillbirths and congenital anomalies.

Out of 120 cases 79 cases (65%) were of abortions and 31 (25%) were of preterm labour. Stillbirth and congenital malformation formed a small group. Majority of Repeated Pregnancy loss in our study group consisted of

habitual abortions and preterm births.

Table No. II.
Previous Pregnancy Wastage by Study Group

Obstetric history (n = 120)	No. of cases	Percentage
1. Habitual abortions	79	65.00%
2. Preterm labour	31	25.00%
3. Stillbirth	05	05.00%
4. Congenital malformations	05	05.00%

Table - III

Showing Incidence of Toxo IgM Antibodies in the Sera of Women with History of Foetal Wastage Compared with other Indian Authors.

Author and place of study (Year)	No. of tested	No. of positive Sera	Percentage
Hingorani et al Delhi (1970)	350	249	71.00
Pal et al Delhi (1975)	109	4	03.60
Mahajan et al Chandigarh (1974)	175	34	41.20
Saini et al Rohtak (1984)	200	38	19.00
Swarnakanta et al (1989)	100	20	20.00
Mehta et al Bombay (1990)	388	85	21.70
Agarwal et al Benaras (1990)	110	21	19.09
Present study (1994)	120	20	16.67

The incidence of Toxoplasma IgM +ve in foetal wastage group, in the present study is 16.67%. This incidence is comparable to the study by Saini (1984) 19%, Swarnakanta et al (1989) 20%. Mehta et al (1990) 21.7%. The incidence reported by various workers from different parts of the world and India differ because of :

- i) Different type of tests used for screening.
- ii) Variable number of cases included in the study.
- iii) Prevalence of infection varies widely in different population.

Table - IV
Present Pregnancy outcome of IgM Positive Cases

Pregnancy outcome (n=20)	No. of cases	Percentage
Abortions	12	60.00
Preterm labour	02	10.00
FTND	02	10.00
Total	16	

(Four patients lost to follow up)

Those 20 cases from the study group who were positive for IgM toxoplasma antibodies were followed up for the present pregnancy outcome. 12 patients aborted, 2 ended up in preterm labour, 2 patients carried pregnancy upto term (probably because of Spiramycin therapy) whereas 4 patients lost for follow up.

Conclusion :

The incidence of toxo IgM positive in Repeated Pregnancy loss were 16.67% as compared to 3.33% in the control group. Since this was a pilot study, therapy part was not included. The high incidence of seropositivity in repeated pregnancy loss denotes that this infection may be responsible for foetal wastage. Improved techniques for laboratory diagnosis and therapy should form the future study, in order to avoid many a foetal wastage.

References :

1. Agarwal NR, Kar S, Sen SR, Gagopadhyan A, Sen P.: J. Obst & Gyn. India 49 : 165; 1990.
2. Hingorani V, Prakash O, Chowdhary P, Kamlan TS.:Ind. J Med. Res. 58:967; 1970.
3. Mahajan R, Chitkara NL, Jolly JG. : Ind. J. Med. Res. 62 : 1; 1974.
4. Mehta AA, Mehta AC. : J. Obst & Gyn. India. 40 : 165; 1990.
5. Pal, M. N, Bhatia, V. N., Kotwani, B. G., Agarwal D.S : Indian J. Med. Res.: 63:11;1975.
6. Saini, S. K., Sharma D; Sabharwal U; J. Obstt & Gync. India. 34: 167; 1984.
7. Swarnakanta, Kasturilal. J. Obst & Gyn. India. 39: 322, 1989.