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Congenital infections are an important cause of fetal and neonatal mortality and morbidity. “TORCH” infections are known to cross the placental barrier and invade the fetus in utero and this has been confirmed by various studies in animals and humans.

For epidemiological surveys, majority of workers prefer ELISA technique for serological tests as this is the most specific, sensitive and reproducible method available (Engerall and Perlmann 1971, 1972).

In the present study, total number of cases who underwent serological tests for “TORCH” infections were 100 antenatal women with bad obstetric history. Out of 100 cases 35 patients screened positive for one or more TORCH infections. 17 cases were positive for toxoplasmosis (12 cases for toxo IgG and 5 cases for toxo IgM). 7 were found positive for rubella IgM, 5 cases for CMV IgM and 6 cases were positive for HSV IgM.

In the control group 50 cases were taken with no bad obstetric history and 3 cases were found positive for TORCH.

Various studies have been conducted in India to find out the prevalence of toxoplasmosis among healthy pregnant women with good obstetric history. While Hingorani et al (1974) reported prevalence of toxoplasmosis Ab in 5% of normal expectant women without any history of pregnancy wastage. Mahajan et al (1975-76)
and Singh et al (1978) reported an incidence of 9% & 7% prevalence of toxoplasma antibodies in their normal antenatal cases respectively.

Toxoplasmosis acquired in first trimester may lead to miscarriage, but if occurring late in pregnancy may result in either asymptomatic and subclinical infection (Lec 1988).

The cases which tested positive for toxo IgM presented with history of spontaneous or recurrent abortions, still birth, congenital anomalies in the newborn and preterm delivery. 12% of cases in study group were positive for IgG toxoplasma antibodies and 5% for IgM toxoplasma antibodies, 34.3% had abortions, 14.3% preterm birth, 2% intrauterine growth restriction, 22.8% perinatal deaths and 8.5% congenital anomalies. The incidence of abortions in the present study is 34.3% which is somewhat comparable to results of Kimball et al (1971) 38% and 32.9%.

Sharf et al in 1973 compared association with preterm labour to be 5.6%. In present study a greater association of 14.5% was observed.

Much higher incidence was reported by Pal et al in 1975 & 1981 of TORCH infection in relation to perinatal deaths. Eckerling et al (1968) reported incidence of 20% and 22.5%. This was comparable to the present study of 22.8%.

Maternal rubella during the first trimester of pregnancy cause fetal damage in the majority of cases. After the first trimester
and particularly during the fourth month of pregnancy the risk of fetal damage declines. There are few reports from India demonstrating clinical evidence for the existence of rubella infection in the population (Veale 1866, Sikander 1930 or Seth et al 1971, Mathur et al 1976).

Seth et al (1971) reported an incidence of 77.5% to 88% in Delhi and neighboring areas while 93.9% was reported from Lucknow. Chakraborty et al (1973) reported a lower incidence 53.14% from Calcutta.

This study gives an indication that rubella infection is common in India and every obstetrician should have it in mind when dealing with a newborn with congenital anomalies and proceed for investigations accordingly.

Primary maternal CMV infection is likely to be transmitted to fetus (Noukeruis 1984, Griffith 1991, Lieyu Lie 1990) suggests the potential for CMV transmission to the fetus in early pregnancy.

Susceptibility to primary CMV infection varies with age, geographic location and socioeconomic standard of the population (Mackay and Wood).

Prospective studies have shown that primary CMV infection occurs in approx 1% of women who are seronegative. In this study 5 CMV IgM positive cases were found.

Genital HSV infection during pregnancy and delivery may have serious effects such as in utero infection, fatal neonatal
viraemia and haemorrhage. (Miller DP 1970, Goldkranel et al 1982). In this study 6 out of 100 patients in study group, with primary genital herpes infection, developed perinatal complications. We found an association between genital HSV infection and abortions, preterm labour and neonatal complications.

In the present study, HIV screening was done in antenatal patients who were positive for TORCH, and no cases were found positive for HIV.

Prenatal transmission of HIV to the fetus occurs in 15-33% of progenies may be requiring termination (Webster Johns 1990). Those desiring to continue pregnancy can be told that there is no evidence that babies born to such mothers are at increased risk of prematurity or growth retardation (John et al 1988).

Transmission of virus from mother to fetus may occur during gestation by crossing the placenta, during delivery by contact with maternal blood, body fluids and post partum via breast feeding. 25% to 35% of infants born of mothers are ultimately infected. In India seropositive rate among pregnant women attending antenatal clinics ranges from 1-5 per 1000.

In the present study majority of TORCH positive cases (37.2%) were seen in age group 24-27 years. No patient screened positive above 36 years old age group. Soni JK et al (1995) reported that sero positivity was more common in age group of 24-30 years. Nagar P et al (1995) also suggested that maximum age group
infected was between 23-27 yrs. Kusum Saxena et al (1993) reported maximum incidence in third decade.

Maximum number of TORCH positive cases were third and fourth gravida. (50% & 34%). Similar observations were made by Soni JK et al (1995). Tomba Singh et al (1992) also found maximum sero positive cases belonged to gravida 3.

In control group also, TORCH positive patients were maximum in third and fourth gravida.

In both study and control group, TORCH positivity was seen according to socioeconomic status. In both groups, seropositivity was maximum in lower socioeconomic group than middle class. Only 1 patient was in upper socioeconomic status. Similar observation was found by Ashrafunseua et al (1998) in Bangladesh where incidence in lower socioeconomic group was 53%.

In our study group we found a higher incidence of TORCH positivity in rural area (38%) as compared to urban area (30%). In control group also, incidence was higher in rural (10%) than urban areas (3.33%).

In the study by Badili stray Pederson (1975) in Oslo and More area, higher seropositivity was in rural population. This could be due to lower resistance to infection and un hygienic living conditions.