DISCUSSION
'TORCH' infections are known to cross the placental barrier and invade the foetus in utero and this has been confirmed by various studies in animals and in human. The isolation of the parasite from the product of conception is the most reliable method to arrive at the diagnosis of the disease.

In this study total cases investigated for TORCH were 100 antenatal pregnant women with bad obstetric history. Out of 100 cases 13 cases were positive for toxoplasmosis (9 cases for Toxo IgG and 4 cases for Toxo IgM) 8 were found positive for rubella, 4 cases were CMV and 6 cases were positive for HSV. (Table No. 2)

In control group 50 patients are taken with no bad obstetric history and 5 cases were positive for TORCH (Table No. 2).

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

The cases who were positive for Ig M Toxoplasma antibodies presented with the history of spontaneous or recurrent abortions, still birth, congenital anomalies in their new born and premature delivery.

9% of cases in study group who were positive for Ig G Toxoplasma antibodies, 33.3% had abortions 11.1% having
congenital malformation, 11.1% have premature labour 33.3% having healthy baby 11.1% having still birth. In this study the incidence of abortion in Toxoplasmosis is 33.3% which is some what comparable with Kimball et al (1971) (38% and 32.9%) (Table No. 9).

The association between Toxoplasmosis and preterm labour was observed in 11.1% cases in our study which is some what comparable with Sharf et al (1973) from Israel (5.6%). Table No. 9.

Still birth, much higher incidence in Toxoplasmosis were reported by Pal et al (1975 and 1981) (45.4% and 40%) Eckerling et al (1968) (20% and 22.5%) and Rozowski and Praweeka from Poland (39.6% and 32.1%). Still birth in our study is some what comparable with Eckerling et al (1968).

Out of 9 women of screened population (44.2%) 4 cases were aborted (11.1) 1 case had premature labour 2 cases (22.2%) had congenital anomalies and 2 cases (22.2%) gave birth to a still born child. (Table No. 11).

Maternal rubella during the first trimester of pregnancy causes foetal damage in the majority of cases. After the first trimester and particularly during the fourth month of pregnancy the risk of foetal damage declines.

A number of studies have been carried out all over the world to study the immune status of women during child bearing age for infection against rubella virus. There are few report from India demonstrating clinical evidences for the existence of rubella infection in the population (Veale, 1866,
Skindar 1930 or serological Seth et al 1971; (Chakarborty et all1973.,Malhur et all 1976.,)

In most parts of the world where sero epidemiological studies have been carried out not more than one fifth of the women of child bearing age are devoid of rubella antibody. Similar findings have been reported from other cities in the north. Seth et al (1971) reported an incidence of 77.5 percent to 88 percent in Delhi and neighboring areas while 93.9 percent was reported from Lucknow. Mathur et al (1974) but Chakarborty et all (1973) reported a lower incidence (53.14%) from Calcutta.

This study suggests that rubella infection is common in India and the obstetrician should think of it in cases of children born with congenital abnormalities and proceed for investigation accordingly.

CMV infection is the commonest antenatal infection and may result from primary maternal infection CMV infection (during first 2-3 weeks of life ) occur in about 1% of all infants and is usually asymptomatic whether due to primary maternal infections or reactivation.

Only primary maternal CMV infection is likely to be transmitted to foetus (Noukeruis 1984, Griffith 1991 Lieyu Lie 1990 ) suggested that potential CMV earlier may transmit CMV virus to their foetal 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 approximately 1% of the women who are seronegative when they are present in early pregnancy and is more likely to occur in younger women. The prevalence of CMV infection varies in different communities and socioeconomic group.

The recurrent maternal infection is less dangerous to the foetus than primary infection, in this study 4 CMV IgM positive cases was found.

On this study HIV testing is done in antenatal patient who were positive for 'TORCH' and no case were found positive for HIV.

The early detection of seropositivity by screening among the pregnant women becomes more important as evidence accumulate the successful use of Zidovudine to delay the onset of AIDS in infected patients (Volberding et all 1990); prenatal transmission of HIV to the foetal occurs in 15-33% of pregnancies requiring termination of pregnancy (Webster Johns on 1990) infected women who desire to continue the pregnancy can be told there is no evidence that babies born to such mothers are at increased risk of prematurity or growth retardation (John et all 1988) All available data indicates that almost all the infected infants will succumb to the disease by the 5th year.

Transmission of virus from mother to the foetus may occur during gestation by crossing the placenta, during delivery by contact with maternal blood, body fluids and post partum via breast feeding; The exact rate of transmission from infected mother to infants is unknown.
The majority of evidence suggests that 25% to 35% of infants born of mothers are ultimately infected. Factors influencing perinatal transmission are severity of mothers illness, timing of mothers infection, parity, presence of intercurrent infections etc. Women with clinical AIDS or cell counts less than 400 are more likely transmit infection to their offspring than asymptomatic seropositive women.

In India seropositive rate among pregnant women attending antenatal clinics ranges from 1-5 per 1000. As such this pandemic disease tends to prevent critical fertility and reproductive issues in women.

In this study total 7 cases were positive for herpes simplex virus HSV-1 (3%), HSV-2, (4%). (Table 7)

In control group five cases were positive for TORCH (4 Toxo lgM, 1 Rubella lgM) in Toxoplasma positive cases out come of pregnancy was normal in two cases and two patients aborted in second trimester. In Rubella positive case patient is eight months pregnant at present without any complications.

**CORRELATION BETWEEN RUBELLA AND HERPES SIMPLEX.**

Miller et al (1982) observed that rubella infection were present more than 80% during the first 12 weeks of pregnancy, 25% at the end of the second trimesters.

In this study 8 cases were positive for rubella lgM antibody. Out of the 100 women, HSV infection in the foetus
as determined by anti HSV IgM responses. Genital HSV infection during pregnancy and delivery may have serious effects such as inutero infection, fatal neonatal viraemia and haemorrhage (Miller DP, 1970 Goldkranetz et al 1982 Manoj GRG 1985 ). Infection to the cervix and vagina have been proved to be one of the etiology of premature rupture of membrane and causes intrauterine and neonatal infections.

In this study of 8 out of 100 patients with primary genital herpes infection patients with primary diseases develop perinatal complications.

These include spontaneous abortion 4 and congenital anomaly in 2 premature birth in 2 cases.

In our study we found an association between genital HSV infection and spontaneous abortion preterm labour and neonatal HSV infection.

In this study 8 patient were seropositive for rubella infection. These infection resulted in four abortion, one premature baby, 1 severely growth retarded baby, one congenitally malformed baby and one was normal. The significantly higher level of antibodies in younger women (less than 26) who had been offered rubella immunization at school, suggests a high level of compliance. Similarly high rate of immunity in the small group of women up to 35 may reflects the effect of immunization following a previous pregnancy as well as more opportunity for exposure to natural infection.
Toxoplasma and Rubella have a prediction for the foetus causing abortion, still birth congenital Malformation.

The gestational age of the concepts at the time of infection profoundly affects the frequency as well as Morbidity of intrauterine infection: Rubella infection in the first trimester has a high probability of infection paradoxically increases with gestational age so that highest in the third trimester.

CORRELATION BETWEEN RUBELLA, TOXOPLASMA AND CMV.

The risk of Toxoplasmosis during pregnancy is reduced by simple advice to the women to avoid contact with soil careful hand washing, thorough washing of raw vegetables and careful disposal of cat litter.

CMV infection is the commonest antenatal infection and may result from primary maternal infection or reactivation of latent infection during pregnancy.

Most authorities argue that routine antenatal screening is not indicated at present; infection occurring very early in pregnancy may be missed.

It seems that any significant reduction in the incidence of congenital CMV infection and it’s sequela will depend on the development of a safe and effective vaccine.
Rubella antibodies were detected in 8 out of 100 patients. Sero-prevalence was significantly higher in women aged 21 to 26.

CMV antibodies were positive in 4 and Toxoplasma antibodies in 13 out of 100 antenatal patients. Prevalence of Toxoplasma antibody increases progressively in women aged (21 to 25) to 7 in age 26-30 (Table 13). Prevalence of CMV antibody diseases will age more in women aged 21-25 (Table 13).