


## Utility & Indications for TORCH test: Let us be clear?

With improving antenatal and perinatal care, maternal and neonatal mortality has been decreasing greatly. To improve the outcome of pregnancy newer tests and techniques are being used to evaluate fetal well-being. These include identification of families at high risk of genetic disorders and to offer them genetic counselling and prenatal diagnosis. The other useful prenatal investigations include Ultrasonographic scans of the fetus for malformation and triple test to screen for Down syndrome.

In addition of these, we have observed that a great majority of women undergo immunological tests for fetal infection (TORCH). Positive result of this TORCH group of infections raise the possibility of fetal infection and many families are advised to terminate the pregnancy for positive TORCH test. This leads to undue anxiety in the family and unnecessary termination of many normal pregnancies for the fear of fetal effects of TORCH infection. Please take 10 minutes of your busy schedule to read the following information. You will find it helpful to decide while ordering TORCH tests to a pregnant a non-pregnant woman.

### **Fetal effects of Toxoplasmosis, Rubella, cytomegalovirus or Herpes simplex infections:**

If a pregnant woman gets infected with toxoplasma gondii, rubella or cytomegalovirus during pregnancy then there is a high chance of the fetus getting infected. But transmission of infection can occur only if the maternal infection is during pregnancy. Past infections do not pose any risk to the fetus. The fetal infections may lead to spontaneous abortion or fetal effects like cataract, retinopathy, cardiac defects, microcephaly, hydrocephalus, mental retardation, deafness or acute septicaemia like illness during neonatal period. It should be noted that all maternal infections do not get transmitted to the fetus and many (50-90%) of the infected foetuses are clinically normal.

Toxoplasma and rubella infections provide lifelong immunity and **repeated infections in a person with normal immunity are extremely unlikely**. Reinfection or reactivation of latent infection due to cytomegalovirus is known, but it does not lead to symptomatic fetal infection. In our experience, 90-95% of Indian adults are IgG positive for Toxoplasma, Cytomegalovirus and rubella suggesting that they had the infection in the t and hence, have immunity for the infection and will not get the same infection again in the future. This means that very few women are at risk of Torch infection and its effects or pregnancy.

**Positive IgG and IgM for any of the TORCH test does not give any information regarding the cause and effect relationship between TORCH infection and recent or past abortions.** Any positive TORCH result is very likely due to past infection or false positive result. But it is difficult to definitely rule out the possibility of the recent infection and this leads to series of tests and uncertainties which in turn causes unnecessary load of anxiety on the family and the obstetrician. **To avoid this please avoid doing TORCH tests of pregnant woman and the women with recurrent abortions.**

The only evidence of infection during pregnancy, is conversion of seronegative status (pregnancy or early pregnancy) to seropositivity along with positive IgM. To identify such a cases, a population based screening programme is needed with the support of centralized high quality laboratory specialized in diagnosis of TORCH infections. In some countries, such population based screening programs were carried out on research basis But due to uncommonness of the problems (The incidence of symptomatic neonatal infections belonging to TORCH group is in the range of 1 per 3000 to 5000), **We are not presently recommending screening of all pregnant women for TORCH infections.**

The important messages regarding the TORCH test given below.

### **Messages:**

- **TORCH infections do not cause recurrent spontaneous abortions and TORCH test is not indicated as a part of evaluation for recurrent spontaneous abortions.**
- Randomly done, a single report of TORCH test cannot be interpreted to give definite opinion whether the infection has occurred during pregnancy or before pregnancy.
- TORCH tests do not have high level specificity and reliability, and the **serious and irreversible decision should not be taken on the basis of results of TORCH test alone.** You might have observed that the results vary greatly from laboratory to laboratory.
- IgM is an indicator of recent infection; **but IgM for most of these infections is known to persist for 6 months to one year.** That means that IgM positive does not always mean that the infection has occurred during pregnancy.
- **The only indications for TORCH test are:-**
  - (i) Fever with rash in a pregnant woman.
  - (ii) Contact of pregnant woman with a case with fever and rash.
  - (iii) Calcification in fetal brain, liver, fetal ventriculomegaly detected by Ultrasonography in the fetus.
  - (iv) Clinical presentation in a neonate an infant suggestive of infection, Serological tests for Herpes simplex infection are too unreliable to be used for clinical purposes. Presence to active lesion of genital herpes may indicate delivery by caesarean section. Most of the herpes simplex infections are due to perinatal transmission and fetal infection due to transplacental transmission is extremely rare.

If you are interested in detailed explanations or have some queries, please feel free to contact me on the address given below.

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