

## The prevalence of TORCH antibodies among newborns with congenital malformations and their mothers in Gorgan, Iran

Mohammad Jafar Golalipour (PhD) \*<sup>1</sup>  
Behnaz Khodabakhshi (MD)<sup>2</sup>, Ezzatollah Ghaemi (PhD)<sup>3</sup>

<sup>1</sup>Professor, Department of Embryology and Histology, Gorgan Congenital Malformations Research Center, Gorgan University of Medical Sciences, Gorgan, Iran. <sup>2</sup>Associate Professor, Department of Infectious Diseases, Gorgan University of Medical Sciences, Gorgan, Iran. <sup>3</sup>Associate Professor, Department of Microbiology, Gorgan University of Medical Sciences, Gorgan, Iran.

---

### Abstract

**Background and Objective:** Primary TORCH (Toxoplasmosis, rubella, cytomegalovirus, herpes simplex virus) and *Treponema pallidum* infections in the mothers can lead to severe fetal anomalies. This study was done to explore the prevalence of TORCH antibodies in newborns with congenital malformations and their mothers in Gorgan-Iran.

**Materials and Methods:** This descriptive, cross-sectional study was done on newborns with major congenital malformations, during 20 months (2003-04) in Dezyani hospital- a referral gynecology center in Gorgan, in north of Iran. The blood sample of 64 newborns with congenital malformations and their mothers collected. Serologic testes were done on newborns and mothers' sera to determine IgM and IgG levels against rubella, toxoplasma gondiae, Cytomegalo virus, Herpes simplex type II with ELISA test. For *Treponema pallidum* PRP test was used.

**Results:** Four of 64 infants (6 %) had positive IgM antibody titers for Toxoplasma, Rubella, and Cytomegalovirus. Nine of mothers with affected newborns (14%) had positive IgM antibody titers for Toxoplasma, Rubella, and Cytomegalovirus.

**Conclusion:** This study showed that the prevalence of TORCH antibodies are observed in 6% of birth defects, in this region.

**Keywords:** TORCH, Congenital malformations, Toxoplasma, Rubella, Cytomegalovirus

---

\* Corresponding Author: Mohammad Jafar Golalipour (PhD), E-mail: [mjgolalipour@yahoo.com](mailto:mjgolalipour@yahoo.com)

Received 9 Jun 2008

Revised 28 Sep 2008

Accepted 5 Oct 2008