# Analysis of Herpes Simplex 1 and 2 IgG and IgM Antibodies in Pregnant Women and their Neonates.

**A. J. Alzahrani[1] MSc, PhD, O. E. Obeid[1] MSc, PhD, A. A. Almulhim[2] AB ObGyne, Jordanian Board ObGyne, B. Awari[3], Atya Taha, [4]Feryal. Al-Ajmi[2], Hatim K. Al-Turkistani[3]**

**[1]Department of Microbiology; [2]Department of Obstetrics and Gynecology; [3]Department of Pediatrics; [4]Department of FAMCO**
**College of Medicine, King Faisal University, Dammam, Saudi Arabia**

## Abstract

**Objectives:** (1) Assessment of prevalence of herpes simplex virus 1 (HSV-1) and herpes simplex virus 2 (HSV-2) antibodies in **pregnant mothers** visiting the **antenatal clinic** and **delivery room** in King Fahd Hospital of the University (KFHU) in Al-Khobar, Saudi Arabia and (2) assessment of prevalence of HSV-1 and HSV-2 antibodies in **cord blood** in the delivery room in KFHU.

**Material and methods**: Laboratory methods used included the type-specific enzyme linked immunosorbent assay to assess HSV-1 and HSV-2 IgM and IgG antibodies in the sera.

**Results:** generated from the samples of pregnant mothers (N=459) showed that 90.5% have detectable levels of HSV-1 IgG antibodies, 6.5% have detectable level of HSV-2 IgG antibodies, 4.3% have detectable levels of HSV-1 IgM antibodies and 0.5% have detectable level of HSV-2 IgM antibodies. As for the cord blood samples (N=459), the IgG antibody reactivity was exactly the same as the corresponding mothers for both HSV-1 and HSV-2. However, only three cord blood samples have detectable levels of HSV-1 IgM antibodies, and none have detectable antibodies for HSV-2 IgM antibodies.

**Conclusions:** Because both HSV-1 and HSV-2 can infect pregnant women and their neonates, assessment of HSV infection in pregnant women and neonates will help in proper management of HSV infection and will also be useful for epidemiological purposes.

**Keywords:** Herpes simplex virus 1 and 2, antibody screening, pregnant women.