Introduction

Hepatitis C virus (HCV) infection is still a world wide problem , it affects about 170 million people with a prevalence of 3 ٪of world's populations ***(poynard et al ., 2003)*** in Egypt , it affects about 12% of the Egyptian population (MOH).

HCV is mainly transmitted by blood transfusion & intravenous drug abuse. However, vertical transmission from an infected mother to her infant has been reported ***(Inoue et al., 1991).*** With prevalence of maternal-Infant transmission in pregnant Egyptian women is 15.8٪ had antibodies to HCV (anti-HCV). However the average vertical transmission rate is 5 ٪but higher in HIV co infected women ***(Resti et al., 2002)***

Up to now, the well-documented risk factor for mother-to-infant transmission of HCV is the maternal high viral load**.** However, factors that promote mother-to-infant transmission have not been completely clarified, including the maternal immune state ***(Batallan et al., 2003)***

HCV –positive mothers have a significantly higher production of endogenous IFN compared with either HCV – negative pregnant mothers or HCV – positive non-pregnant mothers such endogenous production does not correlate with viral load .The high IFN levels in pregnant in comparison with non-pregnant women could likely be due to the Existence of a placental production ***(Abogye-Mathiesen G., et al 1996).***

In fact, during pregnancy, placenta is a source of IFN that can be detected in maternal and fetal blood. In particular it has been demonstrated that human trophoblast produces different levels of IFN and it seems that a high correlation is present between IFN levels in maternal blood and in trophoblast ***(Ebbesen ., et al 1995).*** IFN play a role in the protection from virus infection in utero ***(Paradowska et al., 1996).***

The release of endogenous interferon from the placenta during pregnancy might explain changes in liver enzyme in part, but should not be sufficient enough to interfere with viral clearance. Other factors, such as hemodilution or immune tolerance, may account for the decrease in serum transaminases during pregnancy (***Patemoster et al., 2008***).

In pregnant women with chronic hepatitis C serum alanine aminotransferase levels decreased in the second and third trimesters. The third trimester levels were significantly lower than serum alanine aminotransferese levels before pregnancy ***(gravais et al., 2001***).