

HAEMATOLOGICAL PARAMETERS IN PREGNANT WOMEN WITH HEPATITIS B INFECTION IN NIGERIA

Orluvosu Okwu Collins - student

Scientific supervisor – PhD Olkhovik V. L.

SSU, Department of Obstetrics and Gynecology

Hepatitis B is a viral infection, a DNA hepadna virus type 1 and it is one of the most common serious liver diseases encountered in pregnant women. It is endemic worldwide. Approximately, 350 million people are chronic carriers and only 2% will spontaneously develop antibodies enough to clear the virus from their system according to studies carried out in Nigeria. Hepatitis B is transmitted sexually and through blood and blood products and by other less understood means. Sexual transmission occurs through unprotected penetrative vaginal and anal sex. Hematogenous transmission may be parenteral or vertical.

Various studies have shown that hematological parameters in pregnancy show variation from normal non-pregnant women (Onwukeme and Uguru, 1990; Osoagbaka et al., 2000; Kei, 2004). Neutrophilia is a feature of pregnancy, while neutropenia is common among non-pregnant Africans (Arinola et al., 2004). Various studies have also shown that hepatitis B infection causes diverse hematological changes in pregnancy (Boxall et al., 1994; Chaisiripoomkere et al., 1994; Okada et al., 1995; Di et al., 1999; Metha and Hoffbrand, 1999; Seeger and Mason, 2000). Apart from the hematological changes brought about by Hepatitis B infection on the mother, both perinatal and maternal deaths are substantially increased in Hepatitis B infection more especially in underprivileged populations and developing countries (Tse et al., 2005). There appears to be a high incidence of low birth weight among infants born to mothers with acute infection during pregnancy. It may also cause abortion or premature labour as well as intrauterine death in late pregnancy (Tse et al., 2005). About half of the babies born to mothers who have hepatitis B during pregnancy will show hepatitis B antigen in their blood and a proportion of them will develop hepatic lesions (Tucker, 2001).

Routine examinations and investigations are carried out on the expectant mother to monitor the progress of the pregnancy and to ensure the wellbeing of both the mother and the fetus. This routine examination and investigations include among others the assessment of the hematological status by way of estimating the hematological parameters. Hematological parameters are measurable indices of blood and their values can be used as guide for disease diagnosis such as Hepatitis B infection as well as monitoring of physiological conditions such as pregnancy. According to a study carried out in Nigeria it was established that there is an association between hepatitis B infection, pregnancy and hematological parameters. The prevalence rate of hepatitis B among pregnant women in Nigeria was established as 1.6%. The PCV, Hb Conc., lymphocyte and platelet counts were lower in the hepatitis B positive pregnant women than in the normal pregnant women. Total white cell count was higher in the infected cases than in the normal cases. However, the values in both cases were within the normal range. There were no significant differences in the neutrophil and basophile counts of the test and control. There was no significant correlation between the hematological parameters and maternal age, trimester and gravidity in the control. There was however, a significant positive correlation between gravidity and PCV and hemoglobin concentration in the test.