

Change in high sensitivity c-reactive protein on maternal serum during normal pregnancy

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Objective : To clarify the changes in serum high sensitivity C-reactive protein (hsCRP) during normal human pregnancy.

Methods : A total of 202 normal pregnant women from September, 2004 to August, 2005 who received continuous prenatal care and underwent delivery at Severance Hospital was enrolled in the study. Gestational age ranged between 5 and 39 weeks. Subjects were divided into four groups (group I, 5-9 gestational weeks (GWks) [n=58]; group II, 15-20 GWks [n=63]; group III, 24-30 Gwks [n=34]; Group IV, 30-39 GWks [n=47]). The levels of hsCRP were measured in maternal serum. The hsCRP assay was used by Pureauto S CRP latex (DAIICHI, Japan). CRP reacted with antihuman CRP mouse monoclonal antibody-coated latex, and agglutination occurred.

Results : The mean levels of hsCRP of each groups were 0.18 ± 0.24 , 0.24 ± 0.36 , 0.26 ± 0.2 and 0.29 ± 0.20 in group I, II, III and IV respectively. The group IV data belonged to upper normal range of hsCRP of general reference. Gestational weeks and hsCRP level showed a tendency of positive correlation in this study. But, this correlation had statistically no importance ($p=0.23$). Also, other parameters, such as maternal age ($p=0.11$), delivery weeks ($p=0.08$), delivery mode ($p=0.98$), and birth weights ($p=0.33$) had no correlation with hsCRP.

Conclusion : To our knowledge, this is the first report of change in serum hsCRP during normal human pregnancy. Reference value of hsCRP during pregnancy may be important for making clinical decisions in circumstances such as infection, glucose intolerance during pregnancy, and preeclampsia.