

Studies:

Determination of InterLeukin-8 In Amniotic Fluid

by Leena Dalal

Leena Dalal's, MS, CLS, Director of West Coast Fertility Center's Laboratory, paper has been selected for a poster session at the American Association of Clinical Chemistry's 53rd annual meeting in Chicago, IL. Ms. Dalal's paper is on the "Immunological Effect of Cytokines Present in Maternal System on to Fetus."

DETERMINATION OF INTERLEUKIN-8 IN AMNIOTIC FLUID

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Cytokines are important in the diagnosis of septicaemia. In recent studies higher interleukin-8 (IL-8) plasma levels have been observed in neonates with sepsis. High concentrations of IL-8 have also been demonstrated in amniotic fluid (AF) from women with intra-amniotic infection.

Objective: The data presented here describe the reference range of IL-8 in 150 specimen of AF. Methods: IL-8 analysis was performed by a chemiluminescence immunoassay with the Immulite analyzer (DPCBiermann, Bad Nauheim, Germany). Specimen were taken from amniocentesis. The indication for amniocentesis was advanced age of pregnant women or pregnancy with independent premature birth. Women with other complications of pregnancy were excluded. Results: The concentrations of IL-8 in AF of mothers with non-infected neonates are 88 up to 2,700 pg/ml between week 14 to 22 of pregnancy. The upper limit of IL-8 (AF) concentrations was 972 pg/ml from week 23 to 40 of pregnancy. All pregnancies had no clinical signs for perinatal sepsis. In this early phase of pregnancy there is no explanation for the high IL-8 levels in AF. From week 24 up to birth the cut-off level of IL-8 in AF is 1,000 pg/ml to identify neonates with higher risk of intra-amniotic infection.

Conclusion: Determination of interleukin-8 in amniotic fluid is suitable to avoid a fetal inflammatory response syndrome.