

Evaluation of fetal movements following of maternal intravenous glucose infusion

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Abstract

Adequate fetal movement is one of its health markers, and can be altered under influence of pathologic and nonpathologic causes. Since, glucose is an energetic agent, and it's availability for central nervous system (CNS) provides better coordination of movements through the complex control of CNS, So in present study, we evaluated the effect of maternal glucose infusion on fetal movements accompanied by fetal heart rate acceleration. This 6 month trial was performed on 40 pregnant women, who were admitted to yahyanejad Hospital in Babol. They were divided into two groups with 20 numbers via frequency matching. Patient selection criteria were: age less than 30 years, GA 28-36 week, no history of medical or pregnancy disorders, and normal sonographic findings of fetus. We started the test with blood sampling in order to determine the basal blood sugar, fetal movements counting, heart monitoring with infusion of 25 g glucose (to case group) and the same volume of distilled water (to control group). The same determinants were assessed at 15, 30, 45 and 60 minutes later. Data entered to SPSS and analyzed by t-test and pierreson correlation test. There were significant increases in blood glucose level ($P=0.006$) and fetal movements ($P=0.007$) between two groups at minute 15, 30 and 45. But the correlation of them was incomplete pierreson type. The maximum fetal movements were at minute 30, and the maximum of blood glucose level was at minute 15. So, the infusion of glucose to pregnant women had positive effect on increasing fetal movements, but it didn't have direct correlation. Need to adequate time for glucose metabolism is responsible for delayed correlation between fetal movements and blood glucose level

Keywords: Fetal movement, Glucose infusion, and Fetal heart monitoring

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