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Acta Medica Iranica
2009;47(4) : 205-208

Maternal serum Dehydroepiandrosterone Sulfate levels and the efficiency of labor

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Abstract:

To evaluate the maternal serum dehydroepiandrosterone (DHEA) sulfate levels as a factor influencing labor 'efficiency' at term and unsuccessful labor induction. This is a prospective study. In this study the mean (± standard error) maternal serum DHEA sulfate levels of 90 singleton pregnant women in 3 groups with spontaneous labor, need for augmentation and need for induction were compared.Pregnancies complicated by diabetes mellitus, hypertension, fetal growth restriction, tobacco consumption, corticosteriod use or chorioamintis were excluded. Bishop score of all cases was less than 5. Serum DHEA sulfate levels were measured by radioimmunoassay. Dehydroepiandrosteone sulfate levels and other obstetric variables were correlated retrospectively with the clinically determined requirements of oxytocin augmentation of labor, and the outcome of each induction attempt. The t-test, Variance analysis Kruskal –Wallis test, Mann-Whitney test, chi-square (X2) distribution, linear correlation and regression were used for statistical analysis. P<0.05 was considered statistically significant. This study showed that the mean (± standard error) maternal serum DHEA sulfate level was not significantly higher in women who progressed spontaneously through labor (n=30) than in those who required augmentation (n=30) (60.78±4.22 versus 70.38±5.84). No significant difference was found between the mean DHEA sulfate levels of spontaneous labor group (n=30) and cases who had prolonged latent phase (n=21) (66.78±4.22 versus 67.02±7.13) or prolonged active phase disorders (n=9) (60.78±4.22 µg/dl versus 78.22±10.23 µg/dl p=0.25)This study showed that the mean maternal serum DEHA sulfate level was significantly higher in women with spontaneous labor (n=30) than in those who needed induction (n=30) (60.78±4.22 µg/dl versus 39.49±4.56 µg/dl, respectively; p=0.001).In the group who needed induction, the mean DHEA sulfate level waa significantly higher in women who progressed to active labor (n=18) than in whom attempts were unsuccessful (n=12). (48.83±6.48 µg/dl versus 26.96±5.10, respectively p=0.035). in the group who were induced, the main cause of C/S was failure of labor progression (77.8%).The mean DHEA level was significantly higher in women with spontaneous labor (n=28) than in those requiring cesarean delivery (n=7) (61.01±4.22 µg/dl versus 24.67±7.06, respectively; p=0.001). The maternal serum DHEA sulfate level did not correlate significantly with cervical Bishop score on admission (r=0.02, p=0.78). DHEA sulfate may be an important factor iin successful labor induction, and in efficient labor

Keywords:

Maternal serum dehydroepiandrosterone (DHEA) sulfate ، Labor

TUMS ID: 1159

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