Study the evaluation of vitamin D level in pregnant women and its effect on premature rupture of fetus membranes (PROM)

Abstract

Background & Objective: Vitamin D deficiency is common during pregnancy and at delivery. Recent data suggest that vitamin D deficiency in mothers is associated with some adverse pregnancy outcomes. This study is designed to determine the relationship between the low maternal serum vitamin D levels and several pregnancy outcomes such as: PROM, pre-eclampsia, gestational diabetes, and caesarean section.

Methods: 100 pregnant women with premature rupture of fetal membranes as the case group and 100 healthy pregnant women as the control group were randomly assigned to the study among pregnant women 18 to 35 years old with a gestational age of 28 to 41 weeks, which they were referred to the women's surgery center of Alavi Hospital within 6 months. The blood level of vitamin D was measured. Demographic data and laboratory results and patient history were collected using a researcher-made checklist. Finally, patients were evaluated for vitamin D levels and study factors.

Results: The mean age of patients was 24.03±7 years with a range of 18- 31 years in the case group, 25.24 ± 6.87 years with a range of 18-33 years old in the control group. There was no significant relationship between premature rupture of membranes based on serum vitamin D level and gestational age (P = 0.47). Pre-eclampsia was 33 cases in the case group and 17 in the control group. There was a significant relationship between premature rupture of membranes based on serum vitamin D levels and pre-eclampsia. (P = 0.006)

Conclusion: Low levels of vitamin D during pregnancy are associated with an increased risk of pre-eclampsia and cesarean delivery, but there was no indication of the effect of 25-hydroxy vitamin D levels on premature rupture of fetal membranes, gestational diabetes.

Keywords: vitamin D, pregnant women, premature rupture of fetus membranes (PROM)