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THE VALUE OF VITAMIN D SERUM, INTERLEUKIN-6, INTERLEUKIN-10 IN POST ABORTION OF WOMEN IN SAMARRA CITY

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ABSTRACT : The samples of this study were collected in Samarra General Hospital from 20/9/2018 to 1/2/2019. The study included 40 blood samples from women with a complete abortion that confirming by the medical staff in the hospital, abortion was in first or second Pregnancy's trimester and 20 blood samples from healthy women with normal pregnancy in the same periods of pregnancy. Women in both groups had an age range of (15-50) years. The study designed to evaluated the effect of a number of biochemical variables related to abortion. Thus, the results were: Increase abortion that caused by hormonal and environmental factors. It was shown significant decrease in the rate ofvitamin D concentration with all groups studied, in addition to the significant differences between the secondary groups of the age and the period of pregnancy groups. In addition, we did not notice significant differences between the secondary groups of age. There were differences in the rate of concentration of hormone between periods of pregnancy groups. The study did not detect significant differences with the rate of interleukin-6 concentration for the major groups and secondary groups. The study shown significant decrease in the rate of interleukin-10 concentration in the group of aborted women compare to women with normal pregnancy groups. In addition, there were differences in the concentration of this interleukin between the secondary groups of the age and the period of pregnancy groups.

Key words : Vitamin D, interleukin-6, interleukin-10, Samarra.

INTRODUCTION

Recently, spontaneous abortion (SA) is one of the most problems that women face infertility, effects of those problems were psychological and physiological. (SA) Occurs before 20 weeks' of gestation or when fetus weighs <500 g (Pereza *et al*, 2017). Etiology of (SA) that associate with our study are immunologic mechanisms, maternal infections and possibly environmental exposures (*e.g.* irradiation, smoking, vitamins deficiency, certain drugs) (Kaur and Gupta, 2016). Complete abortion is total, spontaneous rupture of fetus and placenta (Wasson *et al*, 2019). In this study, we chose vitamin D, interleukin-6 and interleukin-10 to assessthe effects of abortion.

Vitamin D, a steroid hormone, is well known to be involved in calcium-phosphate homeostasis and bone metabolism (Ota *et al*, 2014). Vitamin D has become increasingly recognized as a pluripotent regulator of biological functions. Although, vitamin D insufficiency is increasingly recognized as a health problem across the world (Liu *et al*, 2011), impaired vitamin D status during gestation is associated with poor skeletal growth in childhood (Tamblyn *et al*, 2015). However, low maternal levels of the major circulating form of vitamin D, 25-hydroxyvitamin D_3 ($25OHD_3$), have also been linked to adverse outcomes in pregnancy such as pre-eclampsia, a disorder involving dysregulated placental vascularization that affects up to 10% of pregnancies (Lagishetty *et al*, 2011). Expression of vitamin D receptor (VDR) for the active form of vitamin D, as well as the 1α-hydroxylase enzyme has been reported for various tissues that can be broadly termed 'barrier sites' (Townsend *et al*, 2005), the presence of VDR in the placenta suggests that vitamin D functions in tissue-specific fashion at the fetal–maternal interface (Shahrokhi *et al*, 2015). One possible explanation is that 1,25(OH)2D acts as a regulator of placental calcium transport, but a placental immune-modulatory function has also been proposed (Liu and Hewison, 2012). Moreover, the rapid induction of VDR early in pregnancy (Zehnder *et al*, 2002) suggests that vitamin D may play a more fundamental role in the process of conception, implantation and development of the placenta itself (Urrutia *et al*, 2012). In addition to this physiological function, vitamin D modulates the immune system, thus vitamin D deficiency/ insufficiency could increase the risk of many chronic