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Document Title : *Serum zinc level in normal and abnormal pregnancy for women in weterern Region of Saudi Arabia*
مستوى الزنك في احمل الطبيعي و غير الطبيعي في مصمل الحوامل في المنطقة الغربية في المملكة العربية السع

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Abstract : Pregnancy is very complicated process in which many biochemical parameters in the serum, were changing, This study is conducted to establish the standard level of zinc, calcium, magnesium and total protein in the serum of healthy individuals living in the Western Region of Saudi Arabia, by comparing these parameters from healthy pregnant women to non-pregnant healthy individuals, one could see how these levels are changing. Meanwhile, it could also establish the parameters that mostly affected in pregnancy of different illness, -The blood serum of 422 healthy infants, children, young people and elderly people from both sexes between 0 and 70 years of age was examined to appoint the level of zinc, calcium, magnesium and total protein. Zinc was among the parameters that show significant change in all groups studied. In normal healthy individuals, zinc level was high at the earliest stage of life and at age of 15-50 years for both sexes, Mean zinc of all ages was found to be lower (0.47 mg/l) than international established standard (1.00 mg/l), the mean of calcium was (9.82 mg/dl) compared to (4.4 mg/dl), magnesium was (2.04 mg/dl) compared to (2.4 mg/dl) and total protein was (7.78 g/dl) compared to (6.9 g/dl). Zinc and the other parameters were used to compare the health state of healthy pregnant women living in the same area. In pregnancy, a decrease in the level of zinc was evident when compared to healthy non-pregnant women of the same age, which might be due to the utilization of zinc from both mother and fetus for various biological process. Throughout the pregnancy, zinc level is decreasing as pregnancy advances and this decrease is statistically significant. The level of the same parameters, in addition to hemoglobin, iron and copper of healthy pregnant women at the third trimester was used to compare to pregnant women with different illness (diabetic, hypertension, anemic, premature labor, post date, IUGR and kidney disease) living in the same area, Zinc level was also changing when compared healthy pregnant women with pregnant women with different illness, and this change is very clear and evident.. Other biochemical parameters show change at some pregnant women with different illness. This preliminary investigation will be used for further research in clinical biochemistry. Normal pregnant women will be monitored during the trimester of pregnancy for those parameters which showed significant difference to healthy non-pregnant women