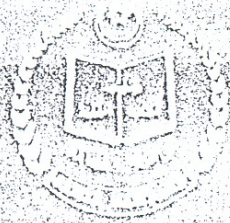

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ZINC CONCENTRATIONS OF BLOOD (PLASMA, ERYTHROCYTE) AND HAIR IN PREGNANT TURKISH WOMEN FROM DIFFERENT SOCIOECONOMIC GROUPS

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Zinc (Zn) is an essential trace element for normal growth and development both in pre and postnatal periods. It has been shown that maternal Zn deficiency may result in intrauterine growth retardation, congenital malformations and fetomaternal complications. The purpose of this study was to investigate Zn status in pregnant women from different socioeconomic (SES) and nutritional backgrounds by measuring plasma, erythrocyte and hair zinc concentrations with atomic absorption spectrophotometer. One hundred and twenty five pregnant women were studied. They were divided into 2 groups on the basis of SES/nutritional status. Fifty two pregnant women were selected as representative of well nourished (WN) and 73 of a poorly nourished group (PN). Sixteen and 37 non pregnant, age matched healthy women were used as controls for blood and hair Zn levels respectively. The plasma Zn levels were significantly low in 73 PN pregnant women in each trimester when compared with those of controls' and WN groups. The plasma zinc levels were low in the 1st trimester and remained low throughout pregnancy in PN women, lowest levels were observed at 3rd trimester. The erythrocyte Zn levels showed a significant increase at the 3rd trimester in both nutritional groups. The mean hair Zn concentration of WN group did not differ from the control values. However, a subgroup of 24 PN pregnant village women had significantly low hair Zn levels as compared to both controls and WN counterparts. The findings in the present study suggest that nutrition may be an important factor during pregnancy in Turkish women.

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SELENIUM STATUS IN CHRONIC GIARDIASIS

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The first evidence of a possible human need for selenium was noted in children with kwashiorkor who had previously failed to respond to the usual dietary treatment. Since low selenium status had been observed in debilitating diseases the clinical relevance of low selenium status in chronic states (e.g. chronic giardiasis) is warranted.

Since blood selenium levels reliably reflect dietary intake of selenium it would also reflect malabsorption in giardiasis. The best method to measure selenium in biological samples appear to be by atomic absorption spectrophotometry. Whereas glutathione peroxidase (a selenium-containing enzyme) activity has also been used as a measure of biological availability of selenium.