



The Involvement Of Obesity In Changes Of Hepcidin And Iron Status In Najaf - Iraq

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ABSTRACT

Obesity have become a global problem affects both, high income countries and developing countries. It is considered as a low grade inflammation state associated with excessive production of cytokines. Hepcidin is a polypeptide hormone, negatively controls serum iron metabolism. It is up regulated in response to inflammation and is thought to play a role in the manifestation of iron deficiency (ID) observed in obese populations. The involvement of hepcidin in changes of iron state and development of iron deficiency anemia in obese Iraqi individuals is not clear There were significant decreases in concentrations of hemoglobin ($P<0.01$), iron ($P<0.0001$) and T_{sat}% in obese men when compared with those of the control group. On the other hand, significant increases in levels of hepcidin ($P<0.0001$), ferritin ($P<0.0001$), T_fR ($P<0.0001$), CRP ($P<0.0001$), EPO ($P<0.001$) and TIBC ($P<0.001$), were obtained in the group of obese men with respect to those of the control group. The linear regression analysis exhibited significant positive correlations of hepcidin levels with values of body mass index ($r=0.52$, $P<0.001$), T_fR ($r=0.42$, $P<0.001$), EPO ($r=0.24$, $P<0.05$) and CRP($r=0.31$, $P<0.05$) in the group of obese men but not in the control group. However hepcidin concentrations were found to be significantly ($r = - 0.40$, $P<0.001$) negatively correlated with iron levels in the group of obese men and decline in T_{sat} % ($r = 0.14$, $p< 0.05$). A hematological examination confirmed the diagnosis of iron deficiency anemia in 35 (38%) out of the 95 investigated men.

Keywords: Obesity, Hepcidin, Iron status (iron deficiency).
