INCREASED SERUM HEPcidIN IN CHILDREN WITH INFECTION AND CORRELATION WITH FERRITIN LEVEL.

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Background and aims: Hepcidin is a recently discovered peptide produced by hepatocytes and macrophages in response to inflammatory stimuli. It is markedly induced during inflammation. There are only limited data on hepcidin regulation during systemic acute inflammation in children.

The aim of this study was to assess the serum concentration of hepcidin in children with bacterial and viral infection and to correlate it with ferritin levels.

Methods: 69 children (43 boys) (mean age 28.94 ± 29.69 months) were enrolled into the study. Blood was drawn for the measurement of hepcidin in 50% of patients on the first and second day of fever and in 50% on the third day. 69 healthy children were used as control population. Hepcidin was measured using Elisa method.

Results: A significant increase in serum hepcidin was observed in children with acute infection (85.25 ± 43.42 pg/ml) compared with serum hepcidin of controls (50.11 ± 28.71 pg/ml), $P < 0.001$. Concentrations of hepcidin correlated positively with serum ferritin levels ($P < 0.01$).

Conclusions: Hepcidin is a new peptide that increases during inflammation. In children with infections, hepcidin production is increased. Its correlation with ferritin levels could propose a new role for hepcidin, the one of acute phase reactant protein although further investigation is needed in order to clarify whether there is difference between bacterial and viral infections.