

Gender peculiarities of disorders of iron metabolism in type 2 diabetes mellitus patients with insulin resistance syndrome and their correction with α -lipoic acid

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Summary. In 85 type 2 patients with signs of insulin resistance syndrome (m/f 42/43) iron overload was revealed comparing to healthy subjects (n=61), which manifested in increased serum transferrin saturation (STS %). Whole serum iron content in men and women did not exceed control level while serum transferrin concentration was lower than in control. Correlation between indices of iron metabolism and metabolic syndrome signs in men and women manifested in a different way. Iron overload in men increased in parallel with enhance of insulinemia, HOMA IR, abdominal obesity and with decrease of testosterone supplying. Negative correlation between serum transferrin level and insulinemia/insulin resistance in women may suggest a negative regulation of hepatic transferrin production by insulin. There was not any significant difference of indices investigated between obese and non-obese patients. Nevertheless there was a negative correlation between transferrin level and BMI (r -0,32 to -0,66) in all groups of patients independently of rate of obesity. Treatment with α -lipoic acid during 15 days normalized serum transferrin saturation both in women and in men as a result of decrease of serum iron content.

Keywords: non-hemic iron, transferrin, saturation, insulin resistance syndrome, type 2 diabetes, α -lipoic acid.