

0246-P1007 Insulin resistance in patients with thyroid dysfunction and hepatosteatosi

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Introduction: Hepatosteatosi is one of the results of insulin resistance. Thyroid dysfunctions effect on insulin sensitivity. The aim of this study was to evaluate insulin resistance in patients with hepatosteatosi and either hypothyroidism or hyperthyroidism.

Design: A total of 407 patients with hepatosteatosi were included. These patients were further divided into two study subgroups and a control group: 102 subjects with hypothyroidism, 103 with hyperthyroidism and 202 with normal thyroid function in the control group. The institution review board of hospital approved the study. Serum TSH, free T4, free T3 concentrations, blood glucose and insulin levels, serum lipid levels, hepatic transaminases and homeostasis model assessment of insulin resistance (HOMA IR) were measured. Insulin resistance was calculated according to HOMA index and compared between the groups. IBM statistics 20.0 for Windows was used for statistical analysis. Ki square and ANOVA tests were used for comparing groups.

Results: Average age was 50.8 ± 14.1 years. Male/female ratio was 141:266. Frequencies of insulin resistance in patients with hepatosteatosi and either hypothyroidism, hyperthyroidism, or normal thyroid function were 43%, 40% and 48% (*P*, nonsignificant), respectively. HOMA-IR indices were not statistically different between groups (*P* = 0.104) (Table 1).

Conclusions: Hypothyroidism and hyperthyroidism are not correlated to insulin resistance in patients with hepatosteatosi. We decided that patients with hepatosteatosi already have insulin resistance despite different associated comorbidities. Similar studies in literature did not emphasize on hepatosteatosi in such cases.

Keywords: Insulin resistance, hepatosteatosi, hypothyroidism, hyperthyroidism

Parameter	Normal Range	Control (N=202)	Hypothyroidism (N=102)	Hyperthyroidism (N=103)	<i>P</i>
TSH (mIU/ml)	0,57 - 5,56	2,97±1,1	18,22±7,4	0,16±0,08	0,001
Insulin resistance frequency	-	97 (48%)	43 (43%)	41(40%)	0,497
HOMA-IR	<2,5	3,5±3,7	3,2±2,1	3,3±3,1	0,104

Table 1: Comparison of groups according to the HOMA-IR and insulin resistance frequency.