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Plasma levels of Apolipoprotein A1 and Lecithin:Cholesterol Acyltransferase in Type 2 Diabetes Mellitus: Correlations with Haptoglobin Phenotypes

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Highlights

Irrespective of haptoglobin phenotype:

- LCAT and ApoA1 were significantly lower in diabetic patients than in controls
- ApoA1 correlated positively with LCAT and HDL-cholesterol

When Hp polymorphism was taken into account, the following were observed

- LCAT and ApoA1 were significantly lower in patients with Hp2-2 than that of patients with Hp2-1 and/or Hp1-1.
- ApoA1 correlated positively with LCAT and HDL-cholesterol only in patients with Hp2-2

ABSTRACT

Background: Previous studies have demonstrated that hemoglobin-haptoglobin (Hb-Hp) complex plays a role in developing vascular complications in type 2 diabetes mellitus (T2DM). The complexes bind with Apolipoprotein A1 (ApoA1) of high-density lipoprotein (HDL), affecting the function of Lecithin:Cholesterol Acyltransferase **(**LCAT), and impairing the reverse cholesterol transport mechanism (RCT). This study investigated the influence of Hp phenotypes on serum levels of ApoA1 and LCAT in patients with T2DM.