

Serum retinol-binding protein-4, leptin, and adiponectin concentrations are related to ectopic fat accumulation.

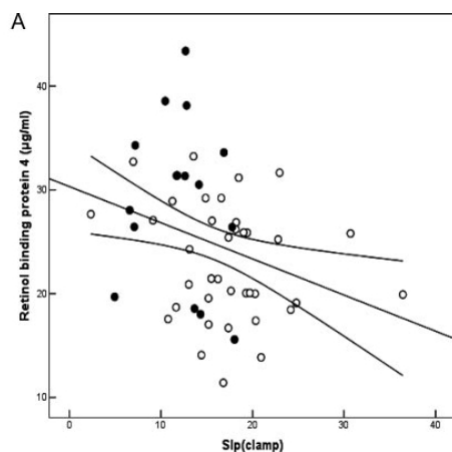
Abstract

CONTEXT: Serum retinol-binding protein 4 (RBP-4), leptin, and adiponectin concentrations identify insulin resistance in varied conditions, but their relationships with insulin sensitivity and ectopic fat accumulation are unclear.

OBJECTIVE: Our objective was to establish how these adipokines are related with intramyocellular lipid (IMCL) and intrahepatic lipid (IHL) content.

DESIGN AND SETTING: We assessed retrospectively serum fasting RBP-4 concentrations in 1) 53 nondiabetic individuals in which insulin sensitivity and IMCL content were assessed by means of the insulin clamp and of 1H magnetic resonance spectroscopy of the calf muscles, and 2) 140 nondiabetic individuals in which insulin sensitivity and the IHL content were assessed by means of the updated homeostasis model assessment and of 1H magnetic resonance spectroscopy. In both experiments, serum leptin and adiponectin concentrations were measured.

RESULTS: Fasting serum RBP-4, adiponectin, and leptin were associated with peripheral insulin sensitivity, were abnormal in the first-degree relatives of type 2 diabetic parents, and correlated with the soleus IMCL content and with the IHL content. The association of RBP-4 and adiponectin with insulin sensitivity was age, sex, and body mass index independent, but stepwise regression analysis suggested that RBP-4, but not adiponectin and leptin, was independently associated with insulin sensitivity. Adiponectin was independently associated with the IHL content, RBP-4, and leptin with the soleus IMCL content.



↓ Scarica

FIG. 1. A, Graphic summary of the correlation between fasting serum RBP-4 concentration and $SI_{P(\text{clamp})}$ (obtained by study 1; ●, offspring of type 2 diabetic parents; ○, normal controls). B, Correlation between

Quesito:

Quale decisione possiamo trarre circa il ruolo di SI (insulin sensitivity) nei confronti di RBP-4 (Serum retinol binding-4), tenendo conto del grafico in figura 1? Cosa rappresentano i pallini bianchi ed i pallini neri? La nostra decisione è massimamente verosimile?

Approfondimento:

Vi sono dei punti metodologici che, a vostro giudizio, meriterebbero di essere chiariti?