

Effect of a somatostatin infusion on circulating levels of adipokines in obese women.

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Objective: Changes in circulating levels of many adipocyte-derived peptides, including adipokines such as adiponectin, leptin and tumor necrosis factor alpha (TNF- α), have been reported in obesity (OB). Somatostatin (SRIF) inhibits circulating levels of adiponectin and leptin in lean (LN) subjects, but the effect of a SRIF infusion on these adipokines, including TNF- α , in OB is to date unknown.

Methods: Ten young women (5 OB and 5 LN) were studied. All subjects underwent an infusion of SRIF (9 μ g/kg/h i.v., over 60 min), with blood samples drawn prior to and at different time intervals after SRIF administration. Plasma levels of adiponectin, leptin and TNF- α were measured at each interval.

Results: Basal levels of leptin and TNF- α were significantly higher in OB than LN women, whereas levels of adiponectin were significantly lower in OB than LN subjects. SRIF significantly inhibited plasma concentrations of adiponectin (at 60 min) in both OB and LN women, without affecting those of leptin and TNF- α in either group. In LN subjects, the inhibitory effect of SRIF on plasma adiponectin persisted up to 150 min, whereas SRIF infusion withdrawal in OB women resulted in a prompt restoration of basal levels of the adipokine.

Conclusions: Plasma concentrations of leptin and TNF- α , which are higher in OB than LN subjects, are unaffected by a SRIF infusion, which, in contrast, inhibits circulating levels of adiponectin in both groups, with a delayed return to the baseline secretion of the adipokine in LN subjects.

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