

Statin on insulin and adiponectin levels: true or false prophecy?

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Dear editor

We read the article “Effect of different doses of statins on the development of type 2 diabetes mellitus in patients with myocardial infarction” by Gruzdeva et al¹ with interest. The authors conducted a prospective cohort study on patients with diagnosed myocardial infarction who were on different doses of atorvastatin, ie, 20 mg/d or 40 mg/d, for new onset of diabetes for a duration of 12 months.

In the results, the authors presented that (Table 2) the levels of insulin in group 1 (atorvastatin 20 mg/d) were 12.95 mU/mL (8.50; 14.60) on day 1 and 9.96 mU/mL (7.40; 12.70) at 1 year. In same vein, the levels of insulin in group 2 (atorvastatin 40 mg/d) were 12.5 mU/mL (8.90; 15.92) on day 1 and 12.67 mU/mL (9.74; 15.70) at 1 year. Moreover, the levels of adipokines (Table 3), ie, adiponectin, in group 1 (atorvastatin 20 mg/d) were 9.1 mg/mL (7.10; 12.40) on day 1 and 14.4 mg/mL (10.70; 17.00) at 1 year. In the case of group 2, the levels (atorvastatin 40 mg/d) were 8.7 mg/mL (5.50; 12.80) on day 1 and 10.6 mg/mL (7.40; 12.80) at 1 year.¹

After careful consideration, it can be understood that increased dose of statin did not affect insulin and adiponectin levels in a dose-dependent manner. In contrast to this, there were eight cases (20.5%) in the atorvastatin 40 mg/d group and one case (2.6%) in the atorvastatin 20 mg/d group diagnosed with new onset of diabetes out of 39 patients in each group.¹

In general, and accumulating data reiterates that, statins cause dose-dependent decrease in the levels of adiponectin and insulin and increase in the levels of glucose, ie, hyperglycemia. On the contrary, the authors presented that the levels of glucose increased along with insulin and adiponectin levels rather than decreased.²⁻⁴

We would be much obliged if you would kindly clarify these issues, and we also believe that managing cardiovascular events is important with statins after assessing the risk versus benefit ratio.

Disclosure

The authors report no conflicts of interest in this communication.

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Dear editor

We would like to thank Venu Gopal Jonnalagadda and Afsar Shaik for the letter in response to our article.¹ Yes, indeed in our study, statins at a dose of 20 and 40 mg/mL, at 20 mg/d

atorvastatin, were observed to improve the sensitivity to insulin and eliminate adipokine imbalance and ghrelin deficiency. At a dose of 40 mg/d, atorvastatin showed increased negative effects, such as a reduction in insulin secretion, hyperglycemia, impaired glucose tolerance, high levels of leptin, ghrelin deficiency, and manifestation of type 2 diabetes mellitus. Statins at a dose of 80 mg/mL were not included in this work; however, at this dose in this study, we observed a decrease in levels of adiponectin and insulin.¹

Disclosure

The authors report no conflicts of interest in this communication.

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