PO189 Gliptin Therapy Improve Adiponectin Levels in T2DM Mets

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PO189

GLIPTIN THERAPY IMPROVE ADIPONECTIN LEVELS IN T2DM METS

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Background: Incretin released by cells in the small bowel in response to food intake, stimulate insulin release. The Incretin are significantly reduced in Type 2 Diabetes Mellitus (T2DM). This hormone have a variety of actions including the stimulation of insulin release from pancreatic beta cell. Some of the study models shows that incretin therapy are give a good improvement in increasing the adiponectin levels. This study is to identified the effect of incretin therapy to adiponectin levels.

Method: This is a pre-post study.We recruited 63 subjects with T2DM-MeTS patients from out patient clinic. We excluded subjects who were on the insulin therapy and we also exclude subject with thiazolidinediones *therapy*. *Most of the subject were refused to received insulin therapy and decided to continue oral anti Diabetik therapy*. All of the sample were treatedwith gliptin as an add-on therapy. We collect the data of HbA1c level and Adiponectin on the first time they recruited as a trial sample. After they agree to involve in this trial, we add a gliptin as an add on therapy to their prior oral anti diabetec therapy. No spesific DPP-IV inhibitor use for this trial, we use sitagliptin, vildagliptin, saxagliptin and linagliptin on their therapeutic dose. We observed all of the subject in 24 weeks. No dose adjustment allowed during the observation, and not allowed to stop or added other Diabetic therapy during observation period. At the end of the observation period, we examine the level of HbA1c and adiponectin. We analyze the levels of adiponectin; A1C; body weight, and blood glucose levels during pre and post Gliptin therapy. We run this study for 6 months observation. We analyze the changes of adiponectin levels by using pair T-test.

Result: The mean of age was 58.98±12.28 years, average levels in A1C1 before therapy: 8.56±2.1% while after giving gliptin therapy is 7.47±1.4%. While for the average levels of adiponectin before given gliptin therapy are 6.07±2.61 and after therapy was 6.17±2.58. For the mean of body weight before gliptin therapy: 80.66±13.55 kg, and 79.66±13.61 kg after treated with gliptin. By using pair T-Test, the results showed the A1c improvement were significant ($r = 0.697$; $p < 0.001$), while the correlation of adiponectin before and after gliptin therapy shows significant results ($r = 0.998$; $p < 0.001$) this result also showed significant in decrease of bodyweight ($r = 0.997$, $p < 0.001$).

Conclusion: Decrease of body weight during gliptin therapy and reduce the visceral fat are the most possibel causes in the elevation of serum adiponectin level. Decrease of body weight should be a result of decrease in visceral fat which can influence in improving the adiponectin level. Study for gliptin as a combine therapy, showed a significant results in reducing total body weight, body mass index (BMI), fat mass, and tissue fat percentage and also the waist circumference (WC), and ended with the elevation of adiponectin level. It still need further clinical research on a larger scale and also long-term gliptin treatment to determine the exact mechanism and the beneficial effects of gliptin on serum adiponectin. In our clinical trial, therewere significant improvement on the level of adiponectin after giving a gliptin as an add-on therapy for 6 months to prior diabetes management to the T2DM MetS subjects and also for the decrease of bodyweight.

Reference(s)

[1] Hibuse T, MaedaN*,Kishida K*, Kimura K, Minami T, Takeshita E, Hirata A, Nakagawa Y,Kashine S, Oka A, Hayashi A, Nishizawa H, Funahashi T, Shimomura I, A pilot three-month sitagliptin treatment increases serum adiponectin level in Japanese patients with type 2 diabetes mellitus – a randomized controlled trial START-J study, Cardiovascular Diabetology 2014, 13: 96.

[2] Furukawa S, Fujita T, Shimabukuro M, Iwaki M, Yamada Y, Nakajima Y, Nakayama O, Makishima M, Matsuda M, Shimomura I: Increased oxidative stress in obesity and its impact on metabolic syndrome. J Clin Invest 2004, 114: 1752– 1761.

[3] Shestakova MV, Suhareva OI, Chernova TO, Shmushkovich IA, Aleksandrov AA, Il'in AV, Dedov II: A combination of dipeptidyl peptidase-4 inhibitor and metformin in the treatment of patients with type 2 diabetes mellitus: effective control of glycemia,weight, and quantitative body composition. Ter Arkh 2013, 85: 49–55.

[4] Furukawa S, Fujita T, Shimabukuro M, Iwaki M, Yamada Y, Nakajima Y, Nakayama O, Makishima M, Matsuda M, Shimomura I: Increased oxidative stress in obesity and its impact on metabolic syndrome. J Clin Invest 2004, 114: 1752– 1761.

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