

## **Anagliptin: A Japanese Made Dipeptidyl Peptidase-4 Inhibitor That Naturally Lowers LDL-Cholesterol in Type 2 Diabetes**

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**Abstract :** Background and Aims: The number of diabetic patients based on obesity is increasing drastically in Asia. Since most patients have multiple complications, if one medicine can treat those at the same time, it would contribute to financial savings and patients' compliance. A Japanese-made DPP-4 inhibitor, Anagliptin is only sold in Japan and South Korea. It is said to have its unique aspect of lowering LDL-cholesterol (LDL-C) levels together with lowering blood glucose. We have assessed 63 patients in our faculty to investigate this fact clinically and statistically. Method: Patients with type 2 diabetes who has been treated with Anagliptin for the first time was investigated changes in HbA1c, fasting and random blood glucose and LDL-C levels from the baseline at 1 month, 6 months and 1 year. Results: 29 patients (46.1%) were given DPP-4 inhibitors for the first time (original group), and 34 patients (53.9%) were using other DPP-4 inhibitors before Anagliptin (exchanged group). The change in HbA1c and fasting glucose from the baseline were -2.0% ( $P < 0.001$ ) and -38.3mg/dl ( $P < 0.01$ ) respectively with original group, -0.5% ( $P < 0.01$ ) and -29.4mg/dl ( $P < 0.01$ ) respectively with exchanged group. 23 patients (36.5%) were using statins or fibrates and 28 patients (44.4%) were using none, and its LDL-C change were -8.1mg/dl ( $P = 0.2582$ ) and -10.1mg/dl ( $P < 0.05$ ) respectively. 16 patients (25%) with LDL-C level  $\geq 140$ mg/dl, change were -21.7mg/dl ( $P < 0.05$ ). LDL-C change did not have a correlation coefficient ( $= -0.03238$ ) with change in HbA1c and was not affected by other diabetic drugs. Conclusion: These findings indicate that Anagliptin is a potential treatment option for type 2 diabetes complicated by hyperlipidemia.

**Keywords :** DPP-4 inhibitors, anagliptin, LDL-cholesterol, type 2 diabetes

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