

The Relationship between Impaired Fasting Glucose and Serum Fibroblast Growth Factor 21 Level

Authors : Nanhee Cho, Eugene Han, Hanbyul Kim, Hochan Cho

Abstract : Pre-diabetes includes impaired fasting glucose (IFG) and impaired glucose tolerance (IGT) and there is a strong probability that pre-diabetes will lead to diabetes mellitus (DM). Serum fibroblast growth factor 21 (FGF-21) is known to be increased as a compensatory response to metabolic imbalance under conditions such as obesity, metabolic syndrome, and DM. This study aims to identify the relationship of serum FGF-21 with pre-diabetes, and with biomarkers of related metabolic diseases. Fifty five Korea adult patients participated in a cohort study from June 2012 to December 2015. The analysis revealed that BMI, FBS levels, and serum FGF-21 levels were significantly higher in the IFG group compared to those in the normal group. A multiple regression analysis was conducted on the correlations of serum FGF-21 levels with BMI, and FBS levels, and the result did not show statistical significance. In conclusion, our results revealed that serum FGF-21 level serve as a marker to predict IFG.

Keywords : cytokine, fibroblast growth factor 21, impaired fasting glucose, prediabetes

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