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2019 SCIENTIFIC POSTER SESSION

P013

Soluble ST2 is Directly Correlated with HbA1c in Individuals With an Average Glycaemia In the Normal/Prediabetes Range

Friday, October 11, 2019, 10:15 – 11:15 AM, 2:25 - 3:25 PM

Saturday, October 12, 2019, 10:00 – 11:00 AM, 2:15 - 3:15 PM

Hasan A¹, Al-Dhahi W²

1. Dasman Diabetes Institute, Dasman, Kuwait; 2. Ministry of Health, Kuwait City, Kuwait

Purpose

Cardiovascular disease (CVD), such as subclinical atherosclerosis and left ventricular systolic and diastolic dysfunction, can be detected in individuals with prediabetes. The purpose of this study was to determine whether sST2, which is elevated in CVD and/or T2D, is associated with glycated haemoglobin (HbA1c) in individuals with glycemia in the normal/prediabetes range.

Methods

A total of 30 adults with HbA1c in the normal (<5.7%) and prediabetes (5.7-6.4%) range were recruited and their anthropometric and biochemical parameters were measured. The plasma levels of sST2 was measured using Enzyme-Linked Immunosorbent Assay kits.

Results

Soluble ST2 was directly correlated with HbA1c ($r = 0.53$; $P = 0.0028$; $n = 30$) in individuals with glycemia in the normal/prediabetes range. Participants who were at the higher end of the HbA1c range (HbA1c 5.8–6.4) had significantly ($P = 0.004$) higher sST2 compared to those at the lower end (HbA1c ≤ 5.5). Similarly, individuals who were at the middle range (HbA1c 5.6-5.7) had higher levels of sST2 compared to those at the lower end (HbA1c ≤ 5.5), which was almost statistically significant ($P = 0.056$). Furthermore, a direct correlation was found between sST2 and waist circumference in these individuals ($r = 0.5$; $P = 0.0099$; $n = 24$).

Conclusions

These data suggest that sST2 increases with increasing HbA1c, and thus may be used to establish a cut-off value for cardiometabolic risk/disease.