

“Correlation of serum ferritin level with Type 2 Diabetes mellitus”

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ABSTRACT

According to World Health Organization (WHO), diabetes directly caused 1.5 million deaths in the year 2012. By 2030, diabetes will be the seventh leading cause of death (WHO 2016). In Finland, the prevalence of diabetes is 7.7 %, and 1% of deaths is due to diabetes (WHO 2016). Most of the diabetes can be grouped in to Type 1 diabetes and Type 2 diabetes. Type 1 diabetes is characterized by absolute scarcity of insulin secretion and Type 2 diabetes occur due to relative insulin deficit in combination with peripheral insulin resistance (American Diabetes Association 2010).(1-2)

BACKGROUND

Serum ferritin is an acute phase reactant, a marker of iron stores in the body. Studies implicate that increased body iron stores and sub clinic alhemochromatosis has been associated with the development of glucose intolerance. This study was carried out to examine and to find correlation between serum ferritin with Type 2 diabetes mellitus.

Objectives-To compare the serum ferritin level between patients of type 2 diabetes and control.

MATERIAL AND METHODS

In this study Total 100 participants were enrolled (50 cases and 50 controls). All participants observed the following tests: haemoglobin, FBS, PPBS (post prandial blood sugar), and serum ferritin level by autoanalyser.

RESULT

We observed, that the mean serum Fasting blood sugar (FBS) level of type 2 diabetes was 196 ± 50.13 mg/dl, which was significantly ($p > 0.05$) higher than control. The mean PPBS level of was 289 ± 60.13 mg/dl in cases, and in Control was 120.6 ± 10.42 mg/dl. Was statistically significant ($p > 0.05$) higher in cases then control.

We have analyzed Serum ferritin level of both the groups the mean ferritin levels were significantly higher in the cases (528 ± 41.26) when compared to controls. (241 ± 53.26) Serum ferritin levels were significantly related to the duration of diabetes.

CONCLUSION

This study shows that there is significant increase in serum ferritin in diabetes mellitus compared to control group and hyper ferritinemia may be one of the causes for decreased insulin production and development of insulin resistance in diabetes mellitus. Serum ferritin also shows correlation with the FBS parameters.