CHAPTER 6

SUMMARY

Gestational Diabetes Mellitus is a form of diabetes affecting the pregnant women who develops diabetes for the first time during pregnancy; the condition is termed as Gestational Diabetes Mellitus. Gestational Diabetes Mellitus occurs in pregnant women who need 2 – 3 times more insulin than normal. It is diagnosed when higher than normal blood glucose levels first appear during pregnancy.

The present study was carried out in the serum sample of GDM and control subjects to compare the parameters such as lipid profile, hematological profile, enzymic and non-enzymic antioxidant status, mineral status, insulin hormone and receptor changes. The serum triglyceride, cholesterol, free fatty acids were found to increase in GDM subjects which is suggestive of rise of cardiovascular disease.

An increase in the level of Calcium, Magnesium, Iron were observed in the GDM group on comparison with control group which may alter the insulin action. The enzymic antioxidant activity such as Superoxide dismutase and Glutathione – S – transferase, were found to increase but the activity of Catalase decreased. The alterations may be due to oxidative stress generated by metabolic changes. No significant change in the activity of glutathione peroxidase was observed. The non-enzymic antioxidants levels of LHP, MDA and NO was found to be decreased. There was no significant alteration in the hematological profile except an increase in the levels of neutrophils, eosinophils, ESR and HbA1C. The level of insulin hormone was found to decrease and the insulin receptor gene was found to show alterations in the melting curve.

FTIR spectral study of LDL particle shown significant changes which is suggestive of the alterations in the structure of LDL and thereby the function.