SUMMARY AND CONCLUSION

The relation between residual pancreatic B- cell capacity and glycemic control has been emphasized by many researchers. Recently the development of an accurate assay to measure C-peptide concentration released in equimolar amount with insulin provide an accurate method of assessing beta cell function.

The main objective of the work is to evaluate the glycemic control in a group of the IDDM patients and relate it to the residual insulin secretion indirectly measured by C-peptide and to assess the exocrine function of pancreas measured by serum lipase and amylase enzymes.

The study included 50 IDDM children (28 males and 22 females) and 25 controls (10 males and 15 females).

- Routine fasting blood glucose was done.
- Glycosylated hemoglobin was analysed.
- Fasting serum insulin and fasting serum C-peptide was done.
- Serum lipase and serum amylase enzyme was done.

Analysis Of The Data Revealed The Following Results:

- Patients had a higher glycosylated HbA1 than controls (9.0 ± 1.6 % Vs 6.9 ± 0.5 % $P < 0.001$)
- Patients had low fasting serum C-peptide than controls (0.04 ± 0.02 Vs. 7.31 ± 5.35 $P < 0.001$)

- Patients had high fasting serum insulin than controls (199.4 ± 90.48 VS 19.54 ± 8.56 P< 0.001) (That is due to exogenous insulin as treatment of diabetes).

- Patients had no significant difference in serum amylase than controls.

  (83.43 ± 25.63 Vs 84.26 ± 25.61 P>0.05).

- Patients had no significant difference in serum lipase than controls.

  (76.4 ± 21.7 Vs 68.4 ± 38.1 P>0.05)

- Basal C-peptide values were significantly reduced, the longer the duration of diabetes, the younger the age of onset and more in males.

In Conclusion:

The presence of correlation between HbA1 and mean value of glucose indicate that regular follow up in a clinic specialized in diabetes has a positive influence on long term glycemic control assessed by HbA1.

Also our results indicate that there is no effect of diabetes on exocrine function of pancreas, it provides an evidence of pancreatic B-cell destruction in type I diabetics which is significantly shortened by younger age of onset, longer duration of diabetes and male gender. This may be helpful in selection of patients who would not likely benefit from the future therapeutic modalities such as immunosuppresion or other therapies. Future information derived from analysis of the recovery phase may be helpful in identifying the optimal time for intervention strategies.