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EDITORIAL

The clinico-pathological conference of the present issue is an interesting case report dealing with haemochromatosis. Though iron over load and diabetes have been long recognized, the nature of relationship is controversial. Diabetes is frequently observed with iron load in experimental models, Bantu population and patients suffering from sidero-achrestic anamia and thalassemia. Presence of cirrhosis, family history of diabetes mellitus of direct pancreatic deposition by iron may all be involved in development of diabetes.

The pancreatic islet cell abnormalities in iron-over loaded diabetic patients are observed to be different from those of Type I (IDDM) and Type 2 (NIDDM) diabetic patients. The islets of iron-over load patients show a particular aspect related to iron surcharge. Microscopically, the islet cells are normal size and round shaped in haemochromatic patient, In Type 1 diabetes there are pseudoatrophic irregular islet. (The mass of immunoreactive islet cell is more than Type 1 diabetics but less than Type 2 diabetics). The typical amyloid seen in Type 2 DM is not seen. In some patients there is adaptive hyperplasia of the islet cells. Immunocytochemistry shows a reduction in number and mass of immunoreactive beta cells. Electron microscopy shows poor granulation of beta cells but normal A&D cells. Glucagon values are in the normal range.

There is no correlation between duration of iron over load and advent of diabetes. The discrepancy is probably due to velocity of iron over load. During treatment these patients may show increased sensitivity to insulin if adrenal glands are also affected by the iron over load. Again, the endogenous hepatic glucose output is also decreased due to liver damage.

I do hope this issue of Diabetes Bulletin will provide useful information to the reader. We welcome any interesting case discussion which could be reviewed in the Bulletin.

M.M.S. Ahuja

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