

Book Review

NNDU proceedings 1994, Ed. Anil Kapur, Health Care Communication, Bombay.

Novo Nordisk Diabetes Update publication is third in a series of update presentations. It is conventional believed that any activity which is performed three times in a row will come to stay and is likely to be performed regularly.

A faculty of 40 eminent diabetologists including four from abroad have contributed to the proceedings of the update.

The subjects selected for the publication vary widely from epidemiology to foot problems in diabetics. However, for this review, the proceedings can be categorized in three sections.

1. Presentations that add new information as to the causation and the profile of diabetes as being observed in India.
2. Pathogenicity of vascular disease, specially in the context of environment and in transitional phase of developing countries.
3. Management issues in diabetes including yoga, diet, education, oral hypoglycaemic agents and insulin.

1) Taking Barker's hypothesis on the relationship of maternal nutrition and low birth weight to the later development of diabetes and cardiovascular disease, Yajnik and his group in Pune have examined 201, four year old children as regards plasma glucose and insulin concentrations at 0.30 and 120 minutes following 75g of glucose. High 30 minute plasma glucose concentrations were observed in children who were low weight at birth and heavy at 4 years, while fasting and 120 minutes plasma glucose concentration showed no relationship to birth weight. Similarly the plasma insulin values were high at 30 minutes and fell with increasing birth weight.

There is a link between reduced intra-uterine growth and the impairment of glucose homeostasis. A long term follow-up will be required to substantiate the relationship of nutrition and beta cell function at birth and its evolution subsequently.

The Cuttack group (Samal, Misra) has been examining the morphological aspects of pancreas by ultrasound in the young-onset diabetes. A shrunken pancreas has been defined when 2 out of 4 dimensions, head, body, tail and length were less than 3 SEM for the group. Compared to the

controls, shrunken pancreas was observed in 56% cases of fibrocalculus pancreatic diabetes (FCPD) (including other features) 19.6% cases of protein deficient pancreatic diabetes (PDPD), 18% cases of insulin-dependent diabetes (IDDs) (duration more than 3 years), and 8.7% cases of non-insulin-dependent diabetics in this series. The effect of overall nutritional status on pancreatic size in eastern India is not clear especially amongst diabetics as a shrunken pancreas is as often observed in IDDM as in PDPD.

Tripura has now joined in reporting MRDM (8.9% of all diabetics) seen at their clinic

A prevalence study of diabetes in a Kerala district which is endemic for calcific pancreatitis revealed pancreatic calcification in 4% of the population screened by X-ray abdomen (3832 subjects) while diabetes was present in 3.83%. The total calorie intake or dietary constituents were not different amongst those with pancreatitis, diabetes and the normal subjects.

2) Visceral obesity and neuro-endocrine abnormalities result in insulin resistance, hyperinsulinaemia and subsequent cardiovascular disease.

Induction of atherosclerosis by insulin may be either direct or through lipids, growth factors or fibrinolytic mechanisms. The main emphasis in intervention is to increase the insulin sensitivity and correct hyperglycaemia. Injudicious use of insulin is not recommended. Nephropathy and autonomic neuropathy share some common aetiology.

Coronary artery disease (CAD) figures for diabetics quoted for our country seem high (6.6-33.3%), ECG abnormalities of 'coronary possible' have been detected in 21% of males and 17% of females with impaired glucose tolerance (IGT) and 12% males and 23% females with diabetes mellitus (DM). This implies that there is more risk of CAD in IGT than DM especially in males. One would have liked further elaboration by the treadmill test and exclusion of other causes for non-specific ECG variations.

Lean diabetics from the south were reported to be free of CAD.

Peripheral vascular disease (PVD) has been observed in 4.5% of diabetics whereas figures for

cerebrovascular disease (CVD) have not been stated in the presentation of the Calcutta group.

3) In the management issue, role of yoga (4 types of pranayam for 30 minutes and shavasana for 15 minutes) have been evaluated in 28 NIDDM patients in Hyderabad who showed improvement in glycaemic control. Incorporating other asanas, 108 patients have now been followed for 8 months. Besides improvement in glycaemic control, there was an increase in treadmill performance and normalization of lipid profile, though no significant weight change was observed. Parameters such as response to stress, catecholamines and endorphins were not measured.

Diets especially in the context of that constituents have been elaborated. The composition of various cooking fats available in the country as regards omega 6 and omega 3 fatty acid has been tabulated. Compliance to diet is usually not good. Emphasis should be on weight control, reduction in the use of animal on weight control, reduction in the use of animal sources of fats or rich dairy products. Diet to suit patient's economic resources, occupation timings and life style are acceptable and seem to be practical.

Effect of oral hypoglycaemic agents on blood lipids, thromboxane, and fibrinolytic activity need

evalutaion. Specific effect of gliclazide on hepatic glucose output and glipizide on postprandial glycaemia was mentioned.

The rationale for insulin therapy in NIDDM is mainly to achieve suppression of hepatic glucose production. This may be given in combination with sulphonlureas wherein intermediate or long acting insulin is added at night or insulin in premixed form is administered twice a day.

Reasons for poor compliance have been discussed, the main issue being lack of communication, complexities of adjustment in dosage of insulin and effect on quality of life.

Regarding education, major emphasis was on teaching self-care skills, and the patient's ability to recognize when things were not moving well. This certainly will reduce the number of hospital admissions and overall cost of treatment.

The book is a good source for updating knowledge in this speciality, provides data-base on different aspects of diabetes practical methods that specialists in the field recommend for management of different aspects of diabetes.

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