

## Diabetes & Western Therapy

### U. Illangasekara

Diabetes is one of the most prevalent illnesses among mankind and affects 20-30 million people in the world. It is a clinical syndrome characterized by raised blood sugar due to a deficiency or diminished effectiveness of insulin. Insulin is a hormone produced by the beta cells of the pancreas and it regulates the amount of sugar in the circulation. Insulin facilitates the entry of sugar into the cells of the liver, muscle and adipose tissue. Hence in the absence of sufficient amounts of insulin, the blood sugar would rise which in turn affects the structure and function of various organs particularly the eye, kidney, blood vessels, nerves and the skin.

As to the causation of Diabetes, the illness arises secondary to interaction between genetic and environmental factors. There are two main types of Diabetes depending on whether there is an absolute lack or defective effectiveness of insulin. The former is called Insulin Dependent Diabetes mellitus (IDDM) and the latter Non Insulin dependent Diabetes mellitus (NIDDM). In addition another type related to malnutrition has been recognised (MRDM).

A patient with Diabetes presents with classical symptoms such as thirst and passage of large amounts of urine or is detected at routine medical examinations. Rarely they are diagnosed for the first time when presenting with complications.

There are three main avenues in the treatment of Diabetes namely dietary restriction, dietary restriction and oral anti-diabetic agents and dietary restriction combined with insulin therapy. The concept of carbohydrate restriction in a diabetic diet has been questioned recently and there is experimental proof that it is not the amount of carbohydrate that is harmful but the total number of calories consumed. The present trend is to advise patients to consume a high carbohydrate low calorie diet and this is particularly relevant in Sri Lanka where the carbohydrates account for a major portion of the diet.

Oral anti diabetic agents act mainly by stimulating the release of sufficient quantities of insulin from the pancreas. The use of insulin which is cumbersome to most Sri Lankans, since it has to be administered as an injection, is mandatory in certain categories of patients. The modern insulins could be classified according to their duration of action, source and purity. Remarkable advances have been made recently on insulin delivery systems which unfortunately is beyond the reach of most Sri Lankan patients.

In spite of vast advances made in the treatment of Diabetes there has been no appreciable reduction in its complications. This has generated renewed interest in understanding the preventive aspects of Diabetes as well as on alternative forms of therapy.