

Beat the Diabetes



Kerala is all equipped with both preventive diabetes care and treatment of all the major complications. We are one step ahead even in the use of insulin pumps, comparing other countries in the Asian subcontinent.

Dr. Jothydev Kesavadev

Diabetes is attracting the attention of the media and the public alike because of two reasons. Firstly, the rate at which the number of patients increasing is alarming. Secondly, the deaths and disabilities due to heart attacks, strokes, kidney failure,

amputations, blindness, etc following diabetes have adversely started affecting the socio-economic status of the nation.

The statistics

It is estimated that India has the largest number of diabetes patients in the world with 41 million in 2007. By the year 2030, the World Health Organization estimates an increase by

150 per cent in India. Studies conducted by 'Diabscreen Kerala' (a project of P. Kesavadev Trust) reveals a stunning prevalence of more than 21 per cent among the urban and rural parts of Kerala. An incredible attendance of patients and care givers in such free awareness programmes underscores the grave necessity of implementation of preventive strategies to curtail this epidemic. The prevalence of pre-diabetes in Kerala is 2-3 times the prevalence of diabetes. Pre-diabetes has its significance in gradually progressing to diabetes and around 30 per cent of them getting affected by the diseases of the blood vessels (heart attacks and strokes).

Why treatment fails?

When compared to other states in India, literacy rate is at its peak in Kerala. However, rapid transition in the economy has led to the consumption of food high in saturated fats combined with sedentary life styles. The treatment of diabetes fails and at the end of 10-15 years enormous expenses are incurred for the treatment of diabetes related complications because of following reasons.

1. Studies reveal that blood sugar, blood pressure and cholesterol are well controlled only in 23.2 per cent of the population. Patients are largely unaware of the fact that heart attacks, kidney failure etc are largely due to high blood pressure and cholesterol in diabetes.
2. Majority of the diabetes patients take care of themselves without involvement of the family members. However successful outcomes via treatment can be expected only when loved and near ones are involved in diabetes care.
3. Insulin injections are the most natural way of treating diabetes. Unfortunately due to fear of injections, 95 per cent of patients receive them late.
4. Diabetes management requires daily exercise, healthy food choices and self-glucose measurement at home. In their absence, long-term management fails completely.

November 14 is celebrated as Diabetes Day worldwide. United Nations recognised diabetes not only as a very serious disease, but also as a very expensive illness in terms of treating long-term complications. This year, emphasis is given on diabetes in children and adolescents. The World Diabetes Day theme for 2007 is "No child should die of diabetes".

5. Diabetes is a silent killer. Only detailed laboratory tests, eye, foot, dental and other head to foot evaluations can determine the stage of the illness and decide on the number of medicines required for preventing further progression of the complications. Lack of money or lack of understanding precludes an average patient from bi-annual evaluations ultimately getting treated with lasers (eye), stents (heart), bypass surgeries, dialysis, kidney transplant, etc which are 10-20 times more expensive than preventive methods.

What Kerala can offer?

Kerala is all equipped for both

preventive diabetes care and treating all the major complications. We are one step ahead even in the use of insulin pumps when compared to the other countries in the Asian subcontinent. India being the diabetes capital of the world, all the modern drugs, newer designer insulins, modern insulin delivery devices, world-class glucometers, diabetic foot wears are all now available at comparatively cheaper rates. All modern facilities for cardiac interventions, foot surgeries, etc are also available in the private sector.

Insulin

The newer designer insulins are called Analogue Insulins. Examples are Lantus, Levemir, NovoRapid, Novomix etc, when used judiciously; they can closely copy the normal human pancreatic insulin secretary profile. The disadvantage of any new treatment modality is the cost involved. However occurrence of dangerously low blood sugar (hypoglycemia) is rare with these insulins, in addition to a multitude of other benefits.

Insulin Pump

Insulin pumps have been in the market for the past twenty years. Insulin pump is not a treatment method, but it helps deliver insulin continuously unlike using a syringe. Insulin pumps are considered to be one of the best methods of delivering insulin resulting in an incredible improvement in the quality of life among children, adolescents and



the working age group including physically and mentally active elderly population. The cost of the pump and consumables are a major limitation for its use in the general population. In India various multinational companies have started marketing insulin pumps because of the growing demand from the patients.

The cost of the pumps as well as deployment charges is cheaper in India when compared to western countries. It is amazing to note that Minimed Medtronic Insulin Pumps manufactured in USA are more expensive in USA compared to India. The cost of the pump is Rs.1,50,000 to Rs.3,00,000 depending on the make and style. The expensive ones are called real time pumps with sensors that measures blood glucose automatically every 10 minutes and display it over the pump screen.

The cost of deployment of pumps is kept at minimum so that it attracts International patients.

Continuous Glucose monitoring

Blood sugar in uncontrolled diabetes fluctuate day and night. CGMS (continuous glucose monitoring system) is a tiny equipment which when worn by the patient for three to six days helps measure blood glucose every 10 seconds. In every 10 minutes, the average is stored in it. This measurement is found to be invaluable in the fine-tuning dosages as well as in planning preventive measures especially of heart diseases.

Telemedicine

Telemedicine is the practice of medicine with the help of telecommunication equipments. Telephone is simplest one. Patients from all over the world report their multiple blood sugars and other values through the telephone or web pages and dosages of medications are modified accordingly.

This is a cheap method of follow up but ensures perfect control of diabetes even without physical visits to the hospital. Patients with very high blood sugar on multiple doses of injections per day or on insulin pumps can be managed as virtual patients, precluding the necessity of hospitalisations and thereby avoiding enormous hospital expenses.

Newer drugs

India being the diabetes capital, all new drugs are freely available and that too at costs lesser than in other countries. The newer inhaled insulins, in cretin groups, etc are going to be introduced in India. However, Pfizer has stopped the production of the first inhaled insulin 'Exubera' owing to its failure in the global market. The first Incretin mimetic, Exenatide according to FDA is now suspected to result in acute pancreatitis in some users. Ultimately the common man should be happy and satisfied with the current safe drugs and all new introductions should be chosen with caution.

Way to Success

The sure and certain way to success in treating diabetes is modification in the behavioural pattern. Comprehensive modern management methods with the help of a diabetic team comprising of physicians, diabetic nurses, diabetic educators, dietitian, etc when carried out meticulously and regularly are not only cost effective but also enables one to be healthy and happy throughout the life lived with diabetes.

This is why Kerala is slowly emerging as a diabetes specialty zone in India, being comparatively cheaper, but well-equipped with modern amenities and well-trained medical and paramedical staff. ■

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