DIABETES—Some important hints and the role of a Nurse in its prevention and management

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In recent years there has been an increased awareness in the community regarding health practices and related conditions that lead to various ailments. More and more people are interested to know about the causes as well as cure of such conditions as heart diseases, cancer, diabetes and such other popularly known diseases. A general awareness is also building up that diseases can be prevented by adopting proper measures at the right time and by following some prophylactic rules. This health awareness may partly be attributed to increase in literacy among the Indian people, and partly to increased activities of the public health authorities, and other agencies imparting health education.

Diabetes has evoked a lot of concern from the public and it is believed in general that diabetes can be controlled by taking certain precautions by taking the right type of diet and by arranging one's daily routine of activities.

Diabetes is of two types—Dibetes insipidus and Diabetes mellitus. The Dibetes insipidus is associated with disorder of the pituitary gland. In this condition a large quantity of urine with low specific gravity is passed but there is no sugar in the urine (glycosuria) Diabetes mellitus is a familial constitutional disorder of carbohydrate metabolism. It is defined as a chronic hereditary ailment, not only of carbohydrate metabolism but of fat protein, electrolyte and water metabolism as well. Metabolic defects result from a relative or absolute lack of insulin which is secreted by the Beta cells in the islets of Langerhans.

Insulin corrects the disturbances in carbohydrate metabolism and is necessary for the synthesis and storage of fat in fat depots. Hypoinsulinism may result from (i) a failure of beta cells in the islets of Langerhans to secrete sufficient insulin. (ii) the reduced effectiveness of insulin and (iii) the increased destruction of insulin by the liver and possibly other tissues. Hypoinsulinism can be corrected only by injecting insulin or by stimulating the beta cells in the islets of Langerhans to produce sufficient insulin required for the body needs.

The symptoms of diabetes mellitus are passing of a large quantity of urine with high specific gravity (polyuria), excessive thirst (polydipsia) and increased appetite (polyphagia). The patient also complains loss of strength and loss of weight off and on.

Diabetes mellituse is a community health problem since it has a relatively high incidence and it affects all age groups. Its complications are many and very serious sometimes, fatal if not attended in time. The symptoms usually appear after the age of 40 years and mostly in obese persons. Juvenile diabetes is a serious condition found in children and adolescents. The incidence of diabetes mellitus is high in the families where more food is available with no exercise. Women suffer more from this condition than men and obesity is another contributory factor. There are, however, effective means for its detection, diagnosis and treatment. With modern methods of therapy, persons with diabetes mellitus can live almost as long as those who do not have diabetes. They can have full and useful lives with few restrictions on diet and activities.

The nurse is a very important figure in assisting the diabetics to live a normal life. While planning health programme for diabetics she must have two general objectives :—

1. To prevent or, if this is not possible, to delay the onset of the disease.
2. To maintain the health and vigour of the individual throughout his life.

In the achievement of these objectives the nurse has three general responsibilities :—

(a) To aid in the detection of persons who are predisposed to or in the early stage of diabetes mellitus.

(b) To participate in the education of the patient, his family and community in the management of diabetes mellitus.

(c) To meet the nursing care needs of the diabetic patients.

Diabetics are susceptible to certain types of infections, especially of skin. The resistance of the skin is diminished and unless the patient observes certain rules, the wounds once formed will not heal easily. The nurse must help the patient to remember the following tips to prevent complications :—

- The patient should not walk barefoot.
- Should wear properly fitting shoes.
- Should avoid socks that are two large, too small, or wrinkled as these may cause blisters.
- Should not wear any tight clothes or accessorics which may interfere with blood circulation.
- Should be careful while cutting the nails esp. toe nails.
- Should not cut or treat the corns on their own.

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- Should not use any medicines on the skin or feet without consulting the physician.
- Should not apply powerful antiseptics such as iodine to delicate tissues anywhere on the body.
- Should avoid extreme heat and cold.
- Elderly diabetics should abstain from such work or activity which might injure the feet or the skin.
- Should take moderate exercise daily.
- Should wash the feet twice a day especially before going to bed with luke warm water, paying special attention in between the fingers and drying it with soft cloth.
- Should avoid visiting crowded and closed places as they are prone to respiratory infections.

Proper diet is a vital part of the treatment of diabetes mellitus as it can generally be controlled through dietary treatment only. Diabetic diet is based on the following principles. The patient should :

- Take more proteins i.e. 100 to 120 gms per day. The sources of protein are milk and milk preparations, meat, eggs, fish, legumes, soya beans, pulses, Bengal gram and ground nuts etc.
- Take limited carbohydrates such as cereals (wheat, rice, maze etc) root vegetables (potatoes, sweet potatoes, Yam, Arbi). Avoid sugar and its preparations. Forty percent of the total calories may come from carbohydrates.
- Use less fat if person is obese otherwise moderate unsaturated fat is recommended.

The nurse needs to be an expert in calculating the diet for a diabetic person and advise him especially on what he can eat and what he should avoid. Diabetics can eat plenty of green leafy vegetables, cooked or raw since these have less calories and contain enough vitamins and minerals, reddish, cucumber tomatoes, lettuce, lemon, onion are good source to give fullness feeling to the stomach. Among fruits one can select grape fruit, guava, orange straw-berries, watermelon etc. A diabetic can eat the same variety of food as the rest of the family with a little modification. However, sugar and sweets and starchy foods must be avoided.

The nurse can be helpful to the patient by accepting his feelings and creating a climate in which the patient feels to express them. A sound programme of instruction adapted to the individual needs of the patient can make a positive contribution towards the acceptance of the therapeutic regimen by the patient. The nurse can also take initiative in organising diabetic clinics and in guiding the diabetics to form their association. It may help the members to meet and discuss their dietary problems. Demonstrations on diet and exhibitions can be organised by the joint efforts of the nurse and association members. The diabetic requires skilful care and thoughtful guidance to gain confidence. The co-operation of the nurse, patient, family and community is important to the diabetic patient. "Knowledge is freedom".

It is needless to emphasise that the nurse can accept the responsibility of the care of diabetic if she is well informed on all the aspects of the disease. She can do it by reading, participating in seminars, attending clinics and conferences to know the latest therapeutic concepts.

A programme for diabetic patients also needs to be developed throughout India and the nurse can play a pivotal role of an educator, consultant and a friend.

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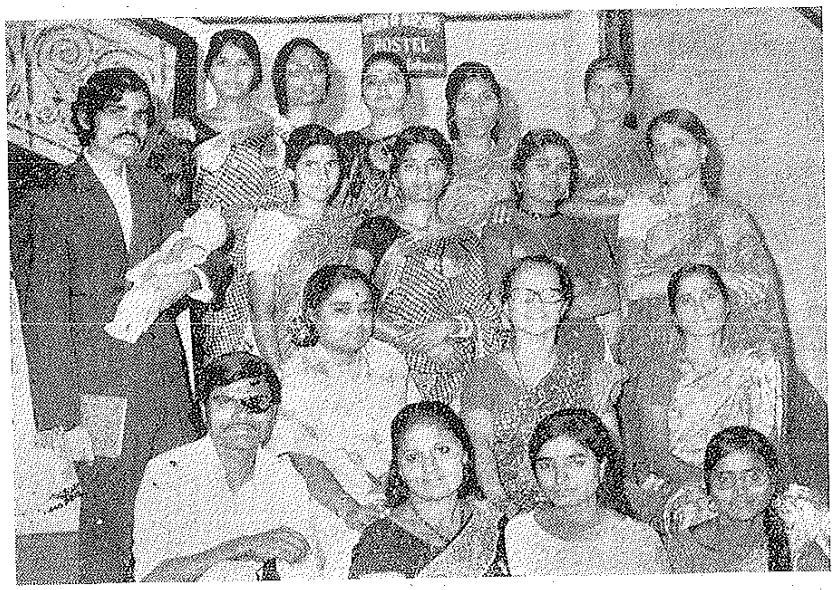

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