Original Article

IS THERE NEED OF SPECIALIZED DIABETES NURSES IN PAKISTAN?

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ABSTRACT:

Objective: To assess the knowledge of the staff nurses of diabetes mellitus working in the various wards of a teaching hospital of Lahore.

Design: Cross-sectional study.

Setting: Hospital based, on the staff nurses working in medical, surgical, cardiology, emergency and psychiatry wards of Mayo Hospital, Lahore.

Main outcome measures: Knowledge of diabetes mellitus of staff nurses.

Methods: Fifty qualified nurses interviewed through questionnaire designed to assess their knowledge about various aspects of diabetes.

Results: Symptoms of disease known to the nurses were polyuria (86%), polydipsia (82%), delayed wound healing (74%) unexplained ill health (72%), whereas pruritus vulvae (62%), big sized babies at birth (42%), impotency (40%) were elicited in response to prompting. Sixty percent of them were unaware of gastrointestinal symptoms. They were better aware of hypertension (90%), chronic renal failure (70%), ischaemic heart disease (50%) as associated diseases with diabetes mellitus and least aware of autoimmune diseases. Confusion/drowsiness (92%), profuse sweating (80%), heart sinking (72%), blurring of vision (68%) fatigability (68%) pallor (52%), irritability (34%), lack of concentration (26%), feeling of hunger (20%) were known as hypoglycaemic symptoms. They generally had the knowledge of the treatment and was quite adequate. Diet control (92%), diet and exercise (96%), oral and parenteral hypoglycaemic agents (100%) were known to them. However they were less knowledgeable about alteration in treatment. Majority were of the opinion that patients should be controlled on oral hypoglycaemic agents and avoid parenteral drugs. Although nurses knew the diet plays the role in management of diabetes mellitus, but were not aware of types of food given to the patients or how to make changes in the diet.

Conclusion: Nurses working in emergency, medical as well as surgical units should undergo refresher courses for 1-2 weeks in nursing care of diabetics. Effort should also be made to train specialized diabetic nurses. This would reduce the burden on doctors besides improving diabetic care.

KEYWORDS: Nurses, Diabetes Mellitus, Knowledge, diabetic clinic.

Pak J Med Sci April - June 2003 Vol. 19 No. 2 75-79.

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* *Received for publication:* July 3, 2002
Revision received: September 13, 2002
Revision accepted: March 25, 2003

INTRODUCTION

Diabetes mellitus (DM) is emerging as an important health problem. There are about 100 million diabetic patients in the world and the number is likely to increase two fold by the year 2010. Pakistan falls in the area of high prevalence of diabetics and it is feared that the disease will have serious repercussions on our public health in future. It requires lifelong treatment and changes in treatment are to be made according to the need of the hour. "Education" of the patient is of utmost importance which is stressed upon worldwide. In general our

public pays less heed towards management and above all they are less educated and require continuous guidance in this regard. In developed countries follow-up of patients with diabetes are carried out in "Diabetic Clinic" in the outpatient department. In the developed countries the concept of diabetic care team to take care of diabetes with doctors, specialist nurses, dieticians and chiropodists is now very well established. Specialized training is given to nurses in developed counties and it has proven to be of great help both to the doctors and the patients. It is matter of concern that we do not have specialized diabetic nurses in Pakistan, even the nurses who graduate do not possess adequate knowledge to help the patients independently. Nurses are also not updated in the knowledge and management changes of the disease.

SUBJECTS AND METHODS

The present study was conducted to assess the knowledge of he nurses regarding diabetes mellitus. Fifty qualified staff nurses were interviewed through a questionnaire designed to check their knowledge and perception about various aspects of diabetes. The questionnaire contained both prompted and unprompted questions. The response was universal. These nurses had at least five-year working experience in the hospital. These nurses were working in medical, surgical, cardiology, emergency and psychiatry wards of Mayo Hospital, Lahore. This is one of the biggest public sector hospitals in Punjab. A standard Proforma was filled by the undergraduate research students. The questions were regarding modes of presentation of diabetes mellitus, associated diseases, hypoglycaemic symptoms and treatment of the disease. Responses were documented as "Yes", "No", "Yes on prompting" or "Do not Know". All this data was later analyzed by the statistician.

RESULTS

For the commonest symptoms of diabetes mellitus polyuria (86%), polydipsia (82%), delayed wound healing (74%) and unexplained ill health (72%) were the first response by nurses. Pruritus vulvae (62%), big sized babies at the time of birth (42%), impotency (40%) were responded on prompting. "No" was response noted in polyphagia (40%), impotency (42%), weight loss (32%). Gastrointestinal symptoms were noted to be known to only 8% and 60% were unaware of different gastrointestinal symptoms of DM (Table-I). Nurses were better aware of hypertension (90%), chronic renal failure (70%) and ischaemic heart disease (50%), least aware of autoimmune disease (16%) as diseases associated with DM. However on prompting they were able to reply as shown in (Table-II) Hypoglycemic symptoms were enquired. Confusion/drowsiness (92%), profuse sweating (80%), heart sinking (72%), blurring of vision (68%), fatigability (68%)and pallor (52%) were better known as compared to irritability (34%), lack of concentration (26%), feeling of hunger (20%). On prompting it was noted that lack of concentration (66%) and irritability (42%) were known to them (Tale-III). Assessing the knowledge about treatment, all of them knew that oral hypoglycemic agents, plain insulin and long acting insulin are given to the patients according to their requirement. They had adequate knowledge regarding treatment, that diet alone (92%) diet and exercise (96%) can help in DM management (Table-IV). The knowledge about alteration in dose of oral hypoglycemic and insulin was not adequate, confession was made that they require doctor's guidance to manage the patient. Seventy percent of nurses were of the opinion that patients should avoid insulin as far as possible because the diabetic cannot revert back to oral hypoglycaemics and they will become insulin dependant for life. Diet is taken according to the activity of person. However unlike normal healthy individuals, diabetics have certain restrictions especially concerning pure sugars, although they have a relatively free choice of foods. Nurses under study had poor knowledge regarding types of

food, caloric values and requirements of diabetics. They thought that sugar, sweets, rice and ghee/fats should not be taken whereas they can take honey, whole meal bread, *basun ki roti* (bread made from chickpea flour) and fruits to their fill. (Table-IV).

Table-I: Knowledge of nurses regarding mode of presentation of diabetes mellitus

Parameter	*Yes* (%)	*No* (%)	*Prompt* (%)	*Do not know* (%)
Polyuria	86	4	10	--
Polydipsia	82	4	10	--
Delayed wound healing	74	2	24	--
Unexplained ill health	72	--	26	2
Weight loss	50	32	18	--
Polyphagia	44	40	16	--
Big sized new borns	40	16	42	12
Pruritus vulvae	18	18	62	--
G.I. Symptoms	8	26	6	60
Impotency	4	42	40	14

Table-III: Knowledge of hypoglycaemic symptoms of diabetes mellitus

Parameter	*Yes* (%)	*No* (%)	*Prompt* (%)	*Do not know* (%)
Irritability	34	22	42	2
Fatigability	68	--	30	2
Feel of hunger	20	38	34	8
Confusion/ drowsiness	92	--	6	2
Pallor	52	12	36	2
Palpitations	50	12	36	2
Heart sinking	72	2	24	2
Blurring of vision	68	2	28	2
Lack of concentration	26	6	66	2
Profuse sweating	80	6	12	6

Table-II: Knowledge of nurses regarding associated diseases with diabetes mellitus

Parameter	*Yes* (%)	*No* (%)	*Prompt* (%)	*Do not know* (%)
Hypertension	90	4	2	4
Chronic renal failure	70	8	22	--
Ischaemic heart disease	50	12	36	2
Autoimmune disease	16	20	62	2

Table-IV: Knowledge of diabetes mellitus treatment

Parameter	*Yes* (%)	*No* (%)	*Prompt* (%)	*Do not know* (%)
Diet only	92	4	2	2
Diet and exercise	96	2	2	--
Oral hypoglycaemic	96	--	4	--
Plain insulin	100	--	—	--
Long acting insulin	94	--	6	--

DISCUSSION

The prevalence of diabetes has been increasing in most countries for last 20-30 years[1-3]. Poor glycaemic control is still a problem in our country, patient's education to control blood sugar plays a major role in this respect. Diabetes mellitus is responsible for significant economic losses related to costs of medical care, as well as indirect costs arising from loss of productivity.

In this study most probably the first one of its kind we noted that there exists a significant gap in knowledge regarding diabetes among the nursing profession. Patrick Thorn[4] in UK advocated the trend towards transfer of diabetes care from the hospital to general practice, by setting up mini-clinics in the Wolverhampton area. This was the beginning of the team approach. Later on specialized nurses were trained, on various modes of presentation of a diabetic patient, emergency checking of blood sugar by glucometer and urine sugar/ketones by sticks. They were also trained to commence the treatment of hypoglycemic or hyperglycemic coma, bring about an alteration in doses of insulin/tablets, recommend changes in diet in accordance with activity, tell the difference between good and bad selection of food items. They were well trained to make referral to physician/surgeon/gynecologist and obstetrics/dietician/ophthalmologists or a physiotherapist when required.

So, gradually with the rise in number and training of nurses, problems of the patients were lessened and also a big help to doctors. The nurses guide the patients in Diabetes Care Clinics as well, they visit the admitted patients in the wards and help them out in every aspect. In Great Britain[5], doctors hold two clinics for diabetics every week, whereas specialized nurses hold three clinics a week. On first day of their clinic, stable diabetes patients drop in for fresh prescriptions as per rule patients cannot purchase medicines without it. Patients also report to them and seek help regarding appointments to see either the treating doctor, ophthalmologist, dietician, or surgeon. They do not only help the doctors, but also devote ample time in educating the patients on various aspect of diabetes. Patients are educated on a wide range of topics ranging from signs and symptom of diabetes, hypoglycaemic agents (insulin and tablets) foot care, and insulin injection sites, to possible complications like infections, hypoglycaemia and hyperglycaemia. It was also noted that fewer barriers exist between patient and the nurse than between the patient and doctor. This is reflected in the greater freedom with which the patients, confess to nurses about lapses in treatment. The patient in pursuit of diagnosis and prescription naturally goes to the doctor, but the patient wanting help with specific problems in home circumstances is more likely to approach a nurse.

Acheampong et al[6] also tried this practice in one of the African hospitals, where they found that initially patients hesitated in seeing the diabetic nurses in the hospital, later on they posed confidence in them. This is how the workload was reduced on the doctors by handling education, teaching of diet and management of stable patients and thus complemented the work of physicians.

In another study[7] it was noted that diabetes specialist nurses are potentially cost saving by reducing hospital length of stay. There was no evidence of an adverse effect of reduced length of stay on re-admissions, use of community resources or patient perception of quality of care.

In Punjab nurses are being trained as specialized nurses in certain specialties like Psychiatry, Paediatrics, Opthalmology, Intensive Care Management, Cardiology and Community health. In Federal Postgraduate Institute of Nurses in Islamabad, they are also being trained in anaesthesia as specialized anaesthesia nurses. Unfortunately nowhere training as "Diabetes specialist nurse" is imparted. It is the need of the hour to have specialized diabetes nurses. It will not only be a big help to doctors but also improve patients management by education of diabetic patients and this will reduce the burden on family and community as a whole.

CONCLUSION

Today's knowledge explosion and technology expansion is increasing knowledge of diabetes mellitus at a faster rate than nurses are able to absorb through traditional professional activities. In addition, the majority of staff nurses do shift work, and this coupled with personal responsibilities makes it difficult for them to pay more attention to education programs. In addition, some nurses do not discern the need for continuing education. People come to the health care professional seeking a diagnosis of their health problem. The information provided by the physician or nurse, therefore, helps the patient learn new ways of managing health problems that had been identified. Nurses have been traditionally educated to support the medical model of care, but with the changing times, they have to learn and modify patient care with an emphasis on health and wellness in a model of holism. These realities demand that the knowledge of the nurses regarding various diseases must be up-to-date and they should be able to properly educate the patient regarding the basics of the disease. In the light of the present study it is recommended that either the nurses working in emergency/medical/surgical units should have annual refresher courses of 1-2 weeks or like other specialties in the nursing field, diabetic nurses should be trained. This would lessen the burden on doctors and would bridge the gap between doctors and their patients.

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