Original Article

Risk factors, associated health problems, reasons for admission and knowledge profile of diabetes patients admitted in BPKIHS

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Abstract

Objectives: The objective of the study was to find out the demographic profile, identify the known risk factors, assess the associated health problems, find out the reasons for admission and explore the knowledge profile of the patients admitted with diabetes in medical units of BPKIHS.

Methods: It was hospital based exploratory study conducted among the admitted DM patients during the period of 1-3-2003 to 29-2-2004 in medical units using simple random sampling, which included 35 samples. The data was analysed using Excel and SPSS programme.

Results: About 54% subjects were of age group between 40-60 yr., Hindu 85.7%, married 92.9%, and non-vegetarian 75.9 %. About 50% of subjects were on Insulin. About 60.7 % subject had hypertension, 39.3 % had ocular problem, and 25 % had renal problems. Majority of subject (82.1 %) had knowledge about the disease, they were suffering but limited subject had the knowledge about, causes, curability, treatment modalities, diet, and other aspects.

Conclusions: As the knowledge regarding various aspects of DM is very low, there is need for information booklet in Nepali and health education programme among public will be very beneficial.

Key Words: Risk Factors, Associated Health problems, Knowledge profile, Diabetes.

Diabetes Mellitus (DM) is a chronic disease caused by inherited and/or acquired deficiency in production of insulin by the pancreas, or by the ineffectiveness of the insulin production. It is a syndrome caused by an imbalance between insulin supply and demand, characterised by hyperglycaemia and associated with abnormal carbohydrate, fat and protein metabolism. Insulin deficiency results in increased concentrations of glucose in the blood, which intern damage many of the body's systems, in particular the blood vessels and Nerves[2].

As the number of people with diabetes grows world-wide the disease takes an ever-increasing proportion of national health care budget. Without primary prevention, the diabetes epidemic will continue to grow even worse. Diabetes is projected to become one of the world's main disablers and killers within the next twenty-five years. Immediate action is needed to stem the tide of diabetes and to introduce cost effective treatment strategies to reverse this trend[3].

DM is a chronic disease that affects approximately 14 million people and among those 7 million was un-diagnosed. Among older people (>65 years) 8.6 had type-II DM. Type-I DM approximately account for 10% and type-II 85-90% of all known cases of DM in United States[3].

There is rising prevalence of the disease in the developing countries, which was rare before, is due to industrialisation, Socio-economic development, and urbanisation and changing life style[3]. Type-II DM is more prevalent than type-I DM and constitutes nearly 90% of cases among the diabetes[3]. The prevalence of diabetes increases with age. The prevalence[3] of type-II DM in female was relatively lower (5.57%) than males (6.73%).

The high incidence (new cases) of type-II DM in Nepal was found due to lack of public awareness regarding the problems and poor medical service in country[1] . From 28th oct.1997, to 27th Oct. 1998, in Medical OPD of B.P. Koirala Institute of Health Sciences, 1840 patients (1040 M & 800 F) attended with DM[1] Hence, the investigators tried to explore the various facts or problems of the admitted patients suffering with DM.

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Materials and methods

It was hospital based exploratory study conducted among the admitted DM patients in medical-units of BPKIHS during the period of 1-3-2003to 29-2-2004. Using simple random sampling method 35 subjects were selected out of 310 total DM admitted patients. Pre-tested interview schedule in Nepali language was used to collect the information from the subject by the investigator him self and the trained nurses working the same unit. Verbal consent was obtained before conducting the study. Anonymity of the subject was maintained to protect their privacy. The collected data was analysed using excel and spss-4 Programme. The data were analysed using average, mean and percentage and presented in the forms of tables and graphs.

Results

The findings of the study are as follows:

Socio-demographic profile of the subject

Majority of the subjects i.e. 68% were of age group 40-70 years, Females 60%, and Hindu 85.7%. About 48.3% subjects were illiterate and 44.8% housewives. About 37.9% subjects belong to Sunsari and 31.2% Morang. About 51.8% of the subjects were from Nagarpalika (Town), 92.9% Married and 75.9% non-vegetarian. About 50% subjects were hospitalised for less than 5 times. About 25% of the subjects were suffering with diabetes for 6-10 years and same percent of 11-15 years. Majority of the subjects (71.4%) had type-II DM and 75% were on insulin therapy.

Risk Factors

Majority of the subjects (60.7%) was of age group 50-70 years. Only 14.3% subjects were below poverty line, about 29% subjects had the history of having diabetes among their brother and sisters and 21% among their parents. About 26% mothers having diabetes delivered the child of more than 3.5-k.g.of weights. Among the subjects 46.4% had sedentary life style, and 25% subjects had history of stress in their life.

Treatment history of the subjects

About 44% subjects were receiving OHA (Oral hypoglycaemic agent) alone, 75% on insulin therapy, and 85% on diabetes diet.

Associated health problems

About 60.7% of the subjects had hypertension, 25% had renal problems, 25% had neurological problems, 39% had ocular problems, 21.4% had diabetes foot.

Reasons for admission

About 10.7% subjects were admitted for regular check-up, 28.6% for adjusting the dose of insulin, and 35.7% for investigations and treatment of complications.

Knowledge profile of the subjects

Most of the subjects (82.1%) were familiar about the disease they were suffering, 25% were aware of causes of diabetes, 42.9% had knowledge about the treatment of diabetes and 46.4% were aware of the preventive measures.

Discussion

About 89% of the subjects belong to more than 40 years, as type –II DM is common after the age of 40, which is similar as international trends[3]. Most of the subjects 85.7% were Hindu by religion, as Nepal is a country where the majority of the population belongs to Hindu religion.

About 34.5% subjects were Mongolian, followed by Brahmin and Chhetri (31 %) as the hospital is situated in the town Dhahran, where the dominant populations are Mongolian.

Majority of subject (75 %) were Non – vegetarian, as the dominant population were Mongolian and most of them were non-vegetarian. Only 14.3 % subjects were from very low Socio- economic groups. It shows that in general Diabetes is an illness, which usually effect middle and higher economic population than lower socio-economic group, but it is clear that it is not diseases of affluent only. Due to poverty and ignorance poor people are unable to come hospital for treatment.

Fifty percent of the subjects were hospitalised for more than 5 times, where as the mean hospitalised frequency was 6.67 times. As the disease progress the complications also increase and needs frequent admission for investigation of complications and manage problems, which is usual. Most of the subjects (64.3 %) were suffering with diabetic for more than 5 years. The mean duration of having disease is 9.19 years. Since the diabetic cannot be cured, majority of the patients is suffering from illness from long duration. As age progresses, disease also progresses if not managed properly and frequently of admission will increased. Most of the subject (71.4 %) had Type-II DM; and 28.6 % had type –I DM, Similar findings were reported by Smelter[3] Majority of patients (75 %) was on Insulin therapy; where only 25 % administered by themselves, which may be due to lack of proper training during hospitalisation. It emphases the need

for training of self-administration of insulin at hospital to help the patients to be independent.

About 28.6 % subject had history of DM to their brother or sister; 21.4 % to their parents, which indicates genetic association of the disease. Similar findings were reported by Nova[4] . About 60.7 % subject had hypertension, 14.3 % had Cardiac problems, 25 % had renal problems, 25 % had Neurological problems, 39.3 % had ocular (vision) problem, 35.7 % had recurrent infections, 17.9 % had cataract and 28.6 % developed hypoglycaemia as associated health problems. Similar findings were reported by Kapour[5]. These findings suggest that there is lack of proper control on diabetes and patients were not following proper instructions.

The reasons for admission of the subject were: To control blood sugar level and adjust insulin (28.6 %), to treat hypoglycaemia (32.1 %) and to investigate complications (35.7 %), Similar findings were reported by smith[6] and campbell[7]. These findings suggest the poor management to diabetes in there home and needs proper guidance counselling and health education regarding the management and care of diabetes.

Majority of the subject (82.1 %) were familiar about the disease they were suffering with and, 25 % aware the reasons of diabetic, 42.9 % understand the treatment of diabetic, 42.9 % aware of diabetic diet, 32.1 % were aware of symptoms of hypoglycaemia and 42.9 % were familiar with complications of diabetic. Similar findings were reported by funnel[8], Bruni[9] and soundarya[10]. These findings clearly show the poor knowledge among the patients regarding management of disease and their complications.

Conclusion
 Diabetes is a major non- communicable public health problem increasing rapidly in developing countries including Nepal. Without primary prevention, the diabetes epidemic will continue to grow, even worse. Diabetes is projected to become one of the world's main disablers and killer within the next 25 years. As the disease cannot be cured and it is a life long and it can only be controlled, there is need for self-motivation and knowledge to manage the disease. As the knowledge regarding various aspects of DM is very low, there is a need to prepare an informational booklet on diabetic in Nepali and

also health education Programme for client and public will be very beneficial

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