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Short Communication

Profile Study of Hospitalized Diabetes Patients at Indian Private Specialty Hospital

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ABSTRACT

World over, Diabetes is the most prevalent non-communicable chronic disease, responsible for mortality in a big way. Developing countries, due to transition of lifestyle of population amid lower socioeconomic and medical care development, are predisposed to heavy burden of Diabetes. It is the diabetic long term complications that require mechanisms for early detection and management as key to the care. The state of contemporary care of diabetes in local community may be appraised through study of clinical profiles of diabetic patients, who happen to be hospitalized on account of inadequate control/complication of the disease. These findings point to scope for improvement in current care.

KEY WORDS: Type2 Diabetes, Diabetic complications, microangiopathy, Glycaemic control.

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BACKGROUND

Diabetes is commonest of chronic diseases affecting quarter of a billion people across the globe [1]. Wide range of micro and macro vascular complications, e.g. retinopathy, neuropathy, nephropathy and cardiovascular disease associate with diabetes. Control of hyperglycaemia through provision of sustained medical care and supporting the patients through education toward essential self care are valued means to minimizing diabetes complications [2]. Next to infections, ill health resultant of diabetes is becoming important cause for hospitalization in these patients. The quality of available care at given location may be appraised through studying clinical profiles of diabetes patients needing to be hospitalized for various eventualities.

PATIENTS AND METHOD

The study subjects were 41 adult patients both male and females hospitalized in medical wards of CIIMS (Central India Institute of Medical Sciences) hospital in Nagpur City through period of July 2003 to December 2003 carrying the primary diagnosis as uncontrolled diabetes. The written consent for participation was obtained from patients, for use of their medical information in research with assured anonymity. Along with the medical history, sociodemographic particulars of these patients were also elaborated. Their case records were scrutinized, to note details of clinical and laboratory investigation findings as well as prescribed treatment. Duration of diabetes, as period since first diagnosis of diabetes to the present instance of hospitalization was defined.

Self management profile among the patients was assessed by enquiring about adherence to prescribed medications; compliance with corrective lifestyle advice on diet, physical exercise; and whether patient practices self monitoring of blood glucose. Missing of at least one dose of antidiabetic medication, recalled in past 7 days, was the parameter of medication non-adherence. Interruption of treatment for longer than a month was defined as treatment default.

Quality of medical care over preceding one year was assessed by specifically enquiring about frequency of medical checkups; blood glucose and glycosylated haemoglobin determinations; blood pressure and checkups of lipid profile. Any checkups of eye and instances of hospitalization within year were also asked about.

OBSERVATIONS

Clinical and Socio-demographic Profile of Hospitalized Diabetic (all type 2) patients (n= 41)

Age: Median 49 years (range 19 to 72 years)

Sex: Males 21(51%) and Females 20 (48%)

Economic status: Lower middle class 28 (68%); Upper Middle class 9 (21 %); affluent 4 (9%)

Diabetes Duration: Under 1 year 13 (31%) More than 1 year 28 (68%)

Presence of micro-vascular complications

Retinopathy: 14 (34%)

Nephropathy: 6 (14%)

Foot Infection: 1 (2%)

Comorbidity: Hypertension 25 (60%) Other 6 (14%)

Anti Diabetic Treatment: Oral anti-diabetics 29 (70%) Oral AD plus Insulin 18 (43%) Insulin 4 (9%)

Glycaemic state at admission: Hyperglycaemic 37 (90%); Hypoglycaemic 4 (9%)

Self Management Activity Profiles among hospitalized diabetes patients

Received medical advice on diet and physical activity 36 (87%)

Complying with medical advice in regard to: Exercise 16 (39%); Diet 19 (46%)

Knowing antidiabetic drugs taken by name: 25 (60%)

Self blood glucose monitoring: 6 (14%)

Missing regular medical checkup: 26 (63%)

Treatment non-adherence: 8 (19%)

Treatment Default: 12 (29%)

Profile of diabetes care before hospitalization

Frequency of medical consultations: Monthly 20 (48%) In three Months 21 (51%)

Measurement at least in three months of: Blood Glucose 39 (95%) Blood Pressure 30 (73%)

Not done in past Full 1 year: Glycosylated Hb Measurement 37 (90%)

Serum Lipid Profile measurement: 34 (82%)

Urine Analysis: 28 (68%)

Eye examination: 11 (26%)

Instance of hospitalization in past 1 year: 13 (31%)

DISCUSSION

During the study period total 57 patients with uncontrolled diabetes were hospitalized. It was not possible to gather required information's in case of 14 cases, which were therefore excluded. On average the 41 cases included in the report were middle aged, all having type 2 diabetes. Majority were low middle class by income. It was hyper-glycaemic state that associated hospitalization in most instances. A high fraction of patients had received corrective instructions relating diet and physical exercise but nearly half of these were not complying with the same. Majority knew their antidiabetic medications by name. Very small fraction had indulged in self measurement of blood glucose level at home. Majority were adhering to medications but were not regular in getting medical checkups. This indicates perception of inconvenience of financial burden. A third of the patients were at least once hospitalized within a year. Predominantly blood glucose is measured and not glycosylated haemoglobin.

Only fifth of the 41 cases were referred by others and one tenth came as emergencies. The rest majority were admitted through consultations in the hospital outdoors. The emergency admission were mostly for hypoglycaemia, but

all others displayed poor glycaemic control at the first blood sugar checkup, 14 of the total 16 patients exhibiting micro-vascular complications, were receiving antidiabetic treatment only for less than a year. This suggests that diabetes remains undiagnosed for long in the regional population.

Most patients adhered medications but majority ignored instructions relating diet and physical activity. It may be financial constrains that most patients do not adopt self measurement of blood sugar. Better feeling on treatment, may also promote complacent ignoring of self management perspective in the less educated, predominating among economically lower class. High prevalence of hypertension, points to poor care of blood pressure disorder in diabetic patients. The commonest discovery of micro-vascular complication was through eye checkup. The lower rate of detection of nephropathy or foot infection may indicate inadequate care profile. Glycosylated haemoglobin checkup was dismally low, as also blood lipid analysis and even urinalyses. The care scenario is highly deficient in early ability to detection and prevention of chronic complications of diabetes.

CONCLUSION

Generalizability of findings of present report is limited as study is based at paid specialty care hospital of major city. THE ENCOUNTERED CASES FROM RELATIVELY LOWER ECONOMIC STRATA MAY AS SUCH BE AT MORE ADVANCED DISEASE STAGES. Only cases where past medical information was available were included, and hence all were receiving medical care. Nevertheless, hyperglycaemia formed the commonest encumbrance for hospitalization.

Despite access to antidiabetic treatment, such patients only had poor blood sugar control in long run. The micro-vascular complications as well as instances of re-hospitalization within a year have high prevalence. Medical care failed to be optimal in regard to timely screening detection and address of complications. Self management ability also needs to be built. Predominance of hospitalization from lower socioeconomic strata is alarming finding. The study like this need be based on wider scale to address issue of diabetes quality care in our society [3].

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