



Assessment of Standard of Diabetic Care at a Medical College in North Bengal

Sir,

A study of diabetes mellitus patients attended in OPD of North Bengal Medical College was carried out over 24 months period to identify the gap or inadequacy of their management from treatment history and prescription survey. Both male and female type 1 and 2 diabetes mellitus patients were included in the study. Parameters selected for the study were- 1. advises regarding diet, 2. exercise, 3. smoking cessation, 4. control of obesity, 5. control of hypertension, 6. dilated eye examination, 7. screening for neuropathies, 8. autonomic features, 9. foot care, 10. regular sugar check up, 11. glycosylated Hb, 12. urine for routine and microscopic examination, 13. 24 hour urinary protein, 14. serum urea and creatinine, 15. urine microalbumin-creatinine ratio, 16. lipid screening, 17. ECG, 18. use of oral hypoglycemic agents or, insulin, 19. patient education. Parameters were predefined for the study. Exercises include at least 30 minutes morning walk for 5 days/week. SBP \geq 130 mm of Hg and/or, DBP \geq 85 mm of Hg were considered as hypertension. Screening for neuropathies includes loss of joint position and vibration sense, proximal neuropathy or cranial nerve palsy. Screening of autonomic features includes postural fall of blood pressure or any heart rate variability or presence of impotence. Regular sugar check up is considered to be assessed at least once in a month or more. Patients were enquired regarding their assessment of glycosylated hemoglobin and serum urea and creatinine. We had assessed the lipid screening or ECG check up. Even single measurements were included in the study. When there was indication of oral hypoglycemic agents (OHAs), assessment was done for no use, inadequate or proper dosages. Similarly when there was indication of insulin, assessment was done for no use, inadequate or proper dosages. Blood pressure assessment was enquired and adequacy of treatment of hypertension was assessed for no treatment, inadequate or proper treatment. Patient and family counseling and patient education were assessed. For simplicity of the study, many of the parameters could not be included in the study, e.g. antilipid therapy for dyslipidemia etc.

Total 983 patients were included in the study. From prescription analysis and questioning of the patients, gaps were identified in investigation schedules and treatment protocols.

In our study, among the diabetic hypertensives (n-239), 29 % were not getting any treatment, 46% were getting lesser doses and 25% were adequately controlled. Among the patients having indications for OHAs (n-910), 24% patients were not getting OHA, 29% cases were getting inadequate doses and only 47% cases were getting

Table 1 : Shows total no. and percentage of patients advised for clinical check up, investigation and treatment

Investigation schedules/ Percentage	No. of patients	
Treatment protocols	(n-983)	%
ECG	197	20
Lipid screening	79	8
Urine RE/ME	501	51
24hour urinary protein	29	3
Serum urea and creatinine	108	11
Urine microalbumin-creatinine ratio	9	1
Regular sugar check up	550	56
Glycosylated hemoglobin	29	3
Advise on diet	885	90
exercise	767	78
smoking cessation	98	10
control of obesity	280	28
Foot care	9	1
Screening for neurological complication	49	5
autonomic neuropathy	39	4
BP check up	747	76
Ophthalmologic check up	29	3
Waist-hip ratio	19	2
Patient and family counseling	146	15

adequate doses. Ninety eight (98) cases had indications of insulin but 57% cases were not taking insulin, 18% cases were getting inadequate doses and only 25% cases were getting adequate doses.

The quality of diabetes care remains suboptimal worldwide (as well as in India), regardless of country's level of development, healthcare system, or population. In a study from Netherlands, data from 865 randomly selected diabetic patients from 95 general practitioners shows, for 652 patients (73%), blood pressure was recorded. Of these patients, 132 (20%) reached a target level of 135/85 mmHg. In total, 595 patients had hypertension, of whom 192 received no treatment (32%), 193 an ACE inhibitor (32%), and 210 received other antihypertensives.¹ Mike Mitka in his article "Diabetes management remains suboptimal" mentioned that: 50% of patients in US with HbA_{1c} > 9% have a change in therapy; 10% of patients with elevated blood pressure (> 130/80) receive antihypertensive medication; and only 15.4% with LDL levels > 160mg/dl received therapy.² The CODE-2 (the Cost of Diabetes in Europe-Typell) study, conducted in eight European countries has found suboptimal diabetes care in each, regardless of population size or type of healthcare system. In 1990, on the basis of DQIP (Diabetes Quality Improvement Project) measurement set, population based national survey (US) showed that 29% had a HbA_{1c} test, 63% a dilated eye examination, and 55% a foot examination within the last year. Eighteen percent (18%) had poor glycemic control (HbA_{1c}>9.5%). Lipid testing was performed for 85% in the previous two years, but only 42% had an LDL level in good control. Only 66% had a BP of less than 140/90 mmHg³. In Asia, the Diabcare-

Asia project, conducted in the late 1990s was designed to provide largescale, yet simple, standardized information about patient characteristics and care received from numerous centers across each participating country. Results from Singapore, India and Taiwan, using similar methods, have found that between one third and one half of diabetic population had poor glycemic control and that lipid control was suboptimal. These findings were surprisingly similar to both the European and USA studies.

The current challenges are not due to lack of efficacious diabetes treatment but from their implementation across the population. The barriers for effective implementation of diabetes mellitus treatment include – inadequate assessment skill, knowledge deficits and social myths, low awareness among population, poverty, lack of infrastructure of government and private concerns. The term “clinical inertia” is used for inadequate management of chronic diseases. The core of translation research is the current need to translate the vast knowledge of diabetes treatment into readily useable interventions that can be implemented into routine practice.

There is gross inadequacy in quality of diabetes care in Indian population. A systemic protocol is needed across all settings, so that the patients can be benefited maximally despite the limitations. National diabetes control programme is needed for developing strategies for detecting barriers and delivering optimum quality of diabetic care.

G Santra*, J Mukhopadhyay**

*RMO- cum Clinical Tutor; **Associate Professor, Department of Medicine, North Bengal Medical College, Sushrutanagar, Darjeeling, PIN-734 012.

Received : 20.11.2007; Revised - 6.5.2008;

Re-Revised : 31.7.2008; Accepted : 15.8.2008

REFERENCES

1. Schaars CF, Denig P, Kasje WN, et al. Physician, organizational, and patient factors associated with suboptimal blood pressure management in type 2 diabetic patients in primary care. *Diabetes Care* 2004;27:123-8.
 2. Mitka M. Diabetes management remains suboptimal. *JAMA* 2005;293:1845-6.
 3. Saaddine JB, Engelgau MM, Beekles GL, Gregg EW, Thompson TJ, Narayan KMV. A diabetes report card for the United States: Quality of care in the 1990s. *Ann Intern Med* 2002;136:565-74.
-