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Community Medicine

PREVALENCE OF COMPLICATIONS AMONG TYPE 2 DIABETIC PATIENTS OF URBAN SLUM IN ALIGARH

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ABSTRACT

OBJECTIVES: To assess the prevalence of certain complications among type 2 diabetic patients.

METHODS: This community based cross section study was conducted in field practice area of Department of Community Medicine of JN Medical College in Aligarh. 44 diagnosed patients under treatment of Diabetes for more than three months residing in slum area of Aligarh, near the Urban Health Centre of JN Medical College, Aligarh Muslim University between ages 20-60 years were included in this study. Current socio demographic and disease related information were collected by interviewing the patients. The study period was from September 2012 to August 2013. Patients were examined clinically for certain complications and their treatment related documents were also inspected. Data management and analysis was done in SPSS-20.0 version.

RESULTS: A total of 44 (22 male and 22 female) Type 2 diabetic patients were involved in this study. 77.23% patients had complications either micro/ macro vascula or both.

CONCLUSION: Prevalence of diabetic complications was high in the study subjects. There is a need to educate the patients and develop risk factor modification interventions to reduce the occurrence of long-term complications.

KEYWORDS : Type 2 Diabetes Mellitus **(DM-2)**, Complications, Urban Slum, Aligarh

INTRODUCTION

Data from various cross-sectional studies consistently point to the fact that diabetic patients are more likely to develop complications i.e. includes coronary heart disease (CHD), cerebrovascular disease, and peripheral vascular disease, retinopathy, neuropathy and nephropathy. Complications are responsible for the major part of socioeconomic burden of the disease affecting the individuals, their relatives and the health care system of any country. It is estimated that for low-income Indian family having an adult with diabetes, 25% of income may be devoted to diabetes management. (WHO, 2002)

OBJECTIVES:

The aim of this study was to assess the prevalence of certain complications among diagnosed type 2 diabetic patients.

MATERIALS AND METHODS:

This community based cross sectional study was conducted in 44 diagnosed patients under treatment of Diabetes for more than 3 moths, residing in slum area of Aligarh near Urban health centre of J. N. Medical College, Aligarh Muslim University, Aligarh (U.P.). The study is part of larger study and was conducted after ethical approval from Institutional Ethical committee. The study period was one year i.e. from September 2012 to August 2013. Detailed information/ baseline data of all the patients registered were obtained with personal interview or were collected from the records. Inclusion criteria for the study subjects were age >20 years, those type II diabetes patients who were taking treatment for diabetes for more than three months , those giving written consent for study and had no psychiatric illness.

The principal author along with his team of Medico Social Workers interviewed the patients in their households during the field visits. If a patient was not found in a household at first visit, the household was visited again on next field visit days. Initially, the number of patients of type II diabetes registered was 61. Out of them, 11 patients had not given consent and 6 had missing records during study. Hence, these 17 patients were excluded from final analysis. Thus, the total number of participants in the present study was 44 (22 male and 22 female). These patients were interviewed and their current socio demographic and socio-economic information (through B G Prasad classification) was recorded. They were interviewed in-depth regarding the disease, its treatment and it's complications through semi structured proforma and patients were examined clinically for certain complications. Some clinical findings (like history of Angina, percutaneous transcoronary angiography (PTCA), Transient Ischemic Attack (TIA), presence of retinopathy, and stroke) were taken from treatment records. Data management and analysis was done in SPSS-20.0 version.

The following operational definitions were used in the study.

1. Diagnosis of retinopathy was based on documented finding in treatment card or finding the diagnostic signs of retinopathy on eye exams by fundoscopy done in Health Centre by experts.
2. Neuropathy was diagnosed if symptoms of pain, anesthesia, paresthesia, muscular weakness are present along with loss of tendon reflexes (Ankle and planter reflexes were tested), and impaired vibration sense (using 256 Hz tuning fork) were present in the patients.
3. Patients were considered to have nephropathy if they have microalbuminuria or proteinuria.
4. Coronary artery disease was diagnosed by documented angina symptoms and confirmed by an ECG, or from reports of percutaneous transcoronary angiography (PTCA) in patient's record.
5. Cerebrovascular disease was defined by presence of transient ischemic attack or stroke in past medical history.
6. For peripheral vascular diseases- symptoms of claudication were asked and Dorsalis pedis and posterior tibial artery were palpated.

RESULTS AND DISCUSSION:

A total of 44 Type 2 diabetic patients were involved in this study. 50% were males and 50% were females, the mean age of the patient was 51.3±9.7 years, the mean (SD) duration of Type 2 DM was 11 (±5.14) years, ranging from less than one year to thirty two years. 21% patients had diabetes for more than ten years. Most of the subjects were in class II to class IV (B G prasad) of socioeconomic class, means very few patients were earning more than 10,000 per capita annually. (Figure 1) The results of this study showed that out of 44, 34 (77.3%) patients had complications including both micro and macrovascular or any one of them. (Figure 2)

Similar results were also recorded by other scholar (Roaeid, R. B., et al. 2011) where a total of 68.7% patients had complications. Prevalence of complications in diabetics has shown a wide range as is evident from

various studies. Higher prevalence than this study was reported by other researcher (Abougalambou, S.S.I., et al. 2011, Al-Maskari, F, et al. 2007). The differences in prevalence rates of macrovascular complications among Type 2 DM patients as compared with others could be attributed to differences in study design, and population characteristics of various studies.

However according to a scholar (Pittrow, D ., et al. 2006) only 49.5% (type 1) and 50.2% (type 2) of patients had micro- or macrovascular complications. Lower rate of complications as compared to this study might be due to the fact that their patient's had better glycemic control (60%) than the patients in this study (27%).

Conclusion: Chronic complications are highly prevalent among type 2 diabetic patients, Regular and frequent screening of diabetic patients for complications is recommended so that appropriate treatment may be timely initiated to halt the progression of complications.

Limitation of Study: study represents data from a very small sample size, further diagnosis of IHD, TIA are record based, better results may be obtained if ECG and other better investigation to diagnose nephropathy (serum creatinine) were performed in all the study subjects.

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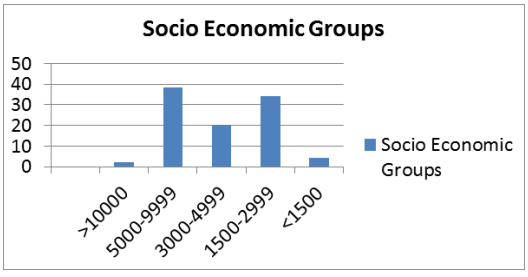

Figure 1: Socioeconomic status of study participants

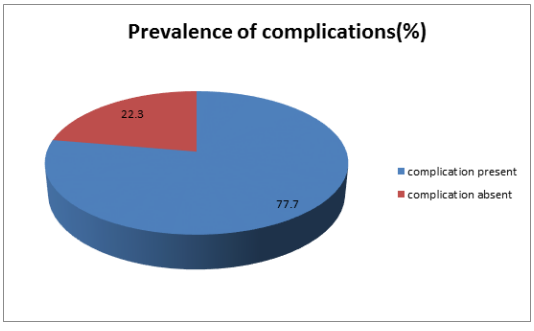

Figure 2: Prevalence of complications among study participants

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