Assessment of type2 diabetes prevalence in four tertiary level hospitals of Khyber Pakhtunkhwa

Ambreen Afridi[1], Rubeena Gul[2],Hayat Muhammad Khan[1],Romana Ayub[1], M.Haider Ali[3],Khushal khan[3],Masroor Anwar[3]

ABSTRACT

BACKGROUND: Type 2 diabetes is the most common form of diabetes and constitutes the majority of cases worldwide. It comprises 85-90% of all diabetes cases, making it a significant public health issue in the majority of developed countries. Evidence suggests that type 2 diabetes is a consequence of increasing levels of obesity, decreased levels of activity, and increased food availability a result of 'modernisation'. Societies undergoing transition to western lifestyles (such as hunter-gatherer societies) are potentially at the greatest risk for developing diabetes. In this context, the prevalence of diabetes among some Indigenous Australians is among the highest in the world. This has been attributed at least in part to lifestyle changes associated with transition from a traditional to western diet.

OBJECTIVE: The purpose of the study was to know the prevalence of diabetes in tertiary care hospitals of Khyber Pakhtunkhwa.

MATERIAL & METHODS: It was a descriptive cross sectional study which was carried out from November 1 to December 31, 2016 in four teaching hospitals of Peshawar. Total 400 subjects above 20 years age were selected from medical units of these hospitals through random sampling technique.

RESULTS: Of the total 400 subjects, 67 (16.75 %) were positive for diabetes. About 90 % had symptoms of excessive urination, excessive thirst and vision problem.

CONCLUSION: Prevalence of diabetes is high but it remains undiagnosed in most of the cases. Screening programs need to be implemented.

Key Words: *Diabetes mellitus, fasting blood glucose, insulin, Prevalence, life style.*

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INTRODUCTION

Diabetes mellitus (type2) is a silent killer. Globally about 382 million people are living with diabetes, majority are Between 40 and 59 years, 80% of them are living in low- and middle-income countries[1,2]. In general all types of diabetes are on the increase but type 2 diabetes in particular is increasing world-wide and it is estimated by 2035 it will increase to 55%[3,4].It is a metabolic disorders and delay in early diagnosis and treatment can lead to increase in mortality and morbidity leading to premature deaths[5]. Moreover the cost of treatment of this disease and its complications is quite high[6]. There is 170% increase in the incidence of diabetes in developing countries as compared to 47% in developed countries[7]. The reasons being population growth, ageing, urbanization, increased prevalence of obesity and physical inactivity[8].

Pakistan ranks seventh among the top ten countries having increased burden of diabetes mellitus.[7] In Pakistan over 7 million cases of diabetes were diagnosed in 2015 making prevalence of diabetes in adults aged 20-79 years 6.9%[9].It is reported that 120,000 people die in Pakistan every year as a result of type II diabetes and its related complications[10]. All these figures are showing an alarming situation in Pakistan. A number of research papers have been published to assess the prevalence and to investigate risk factors of type II diabetes in the different cities of Pakistan[11]. However, the rapid increase of diabetes rate still needs an improved understanding of risk factors. This study was conducted in KP Pakistan where there is no formal survey conducted[12].Findings of this study are important as it doesn't only show us the prevalence of diabetes but also the awareness of people in Pakistan regarding diabetes[13].

1.Community Medicine Department
Bacha Khan Medical College Mardan
2.Community Medicine Department
Khyber Medical College Peshawar.
3.3rd year MBBS Khyber Medical College Peshawar

Correspondence: Dr. Ambareen Afridi
Community Medicine Department
Bacha Khan Medical College, Mardan

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MATERIAL AND METHODS:

It was a descriptive cross sectional study which was conducted from 1 Nov 2016 to 31 Dec 2016 in the four tertiary level hospitals of KP named as Khyber Teaching Hospital(KTH), Hayatabad Medical Complex (HMC), Lady Reading Hospital (LRH) and Ayub Medical Complex (AMC), Abbottabad. Male and female patients were selected from medical units of each hospital by random sampling technique. Fasting blood was taken for blood glucose estimation.

Patients above 20 years of age admitted to medical unit for some problem other than diabetes were included in the study. Pregnant ladies were excluded keeping in mind the possibility of gestational diabetes. Those who knew that they were diabetics were also excluded from the study. Data was collected using structured questionaire with close ended questions. Face to face interviews were conducted after getting informed consent from the subjects. Questions were asked about their purpose of admission to the hospital and symptoms common to diabetes. Drug history was also important to exclude the possibility of drug induced diabetes. Data was collected by a trained numerator by using pre-tested questionnaire analyze by SPSS 17.

RESULTS:

Of the 400 sample diabetics patients were 67 (16.75%);17 (17%) were in KTH,14 (14%) were inLRH, 20(20%) were in AMC and 16 (16 %) were in HMC. Of the 67 cases, 21(31.3%) were females and 46(68.7%) were males.

The signs and symptoms noted in them were:60(89.5%) patients had blurred vision, 60(90%) patients were having problem of excessive thirst and urination, and 59 (88%) patients experienced excessive hunger. Only 07 (10 %) were symptom free. Of the total diabetics, only 7 (10 %) had some knowledge of diabetes (its sign and symptoms and its complication of the total, 62 (93 %) preferred oral medicines to Insulin.

DISCUSSION:

The prevalence rate of diabetes was quite high in our study as prevalence of DM varies among different populations and ethnic groups surveyed which is alarming as economic burden of this non communicable disease is high and it is a major contributor to escalating healthcare cost worldwide[11]. The World Health Organization (W.H.O.) has estimated that the global number of people with diabetes will be more than double over the next 25 years and the developing world would bear an increasingly larger burden of disease in this period[14].

In our study, diabetics were diagnosed accidently with a high prevalence of 16 %, it means that diabetes remains undiagnosed until screened. Similar results are observed in the United States where a major bulk of diabetics remain undiagnosed[15].This study was conducted in KP Pakistan where there is no formal survey conducted, however, similar study was conducted in Karachi [16]. Our study also showed that less people are aware about the disease, the results are consistent with studies conducted in other parts of the country[17]. In our study type 1 diabetes was about 14 % and type 2 was 86 % but it is a little different from a study conducted in some other part of the country[18].

CONCLUSION:

Diabetes Mellitus is a chronic disease having a high prevalence in KP, but majority of cases remain undiagnosed. People have limited knowledge about the disease. Government programs for screening and educating people about this silent killer needs to be started.

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Table: 1 Type of diabetes distribution in the four tertiary level hospitals

Hospital	Sample size	Diabetics Cases	Type 1 Diabetics	Type 2 Diabetics
KTH	100	17 (17 %)	03	14
LRH	100	14 (14 %)	04	10
AMC	100	20 (20 %)	02	18
HMC	100	16 (16 %)	01	15
Total	**400**	**100 %**	**10 (15 %)**	**57(10%)**

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