

## Assessment of the Frequency of Diabetes and its Complications among the Patients of District Shaheed Benazirabad Pakistan.

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### ABSTRACT

**Background:** Diabetes mellitus (DM) is a syndrome of metabolic disorder and chronic hyperglycemia due to relative insulin deficiency, inefficiency or both. Diabetes Mellitus is very noxious and fatal if the proper care is not exercised.

**Objective:** The objective of the current study is to assess the Frequency of DM Type 2 and its complications among patients of District Shaheed Benazirabad Pakistan. **Methodology:** The descriptive cross sectional study was carried out for eight months from June 2019 to January 2020 to find out the prevalence and triggered complications of the Diabetes Mellitus type 2. A total 300 patients were analyzed by purposive sampling technique. Data was collected by using the questionnaire instrument and their verbal consent was ensured. Chi-square test was applied to analyze the association of diabetes and its complications. **Results:** Results reported that there were 205 (68.33%) males and 95 (31.77%) females. It was found that prevalence of Diabetes Mellitus Type 2 was high 135 (45%) in age group of 61-70 years. Diabetic Neuropathy complication was high in 70 (23.33%) patients. It was also found that there was good glycemic control in 175 (83.33%) patients and poor in 35 (16.66%) patients. **Conclusion:** Most of the Patients were suffering from Diabetes Mellitus type 2 and poorly managed patients had more associated complications. **Keywords:** Prevalence, Diabetes Mellitus, Complications

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### INTRODUCTION

Diabetes mellitus has quickly increased to pandemic extents in the course of recent decades. The world health organization (WHO) estimates that, worldwide, 171 million of Diabetic patients in 2002 and is anticipated to increment to 366 million patients by 2030. The prevalence of diabetes was estimated worldwide to be 2.8% in 2000 and 4.4% in 2030.<sup>1-3</sup> Diabetes mellitus type 2 comprises of a variety of dysfunctions

which are characterized by resulting in insulin action resistance and hyperglycemia, lacking of secretion of insulin and increased or inadequate secretion of glucagon.<sup>4-5</sup> Many patients of Diabetes mellitus type 2 are asymptomatic. Clinical signs incorporate: Classic manifestations: Polyphagia, polyuria, polydipsia, paresthesias, loss of weight, blurred vision, infections by yeast like balanitis. Treatment goals of DM2 are as below 1. Microvascular (kidney and eye

disease) reduction of risk through blood pressure and glycemia control.<sup>6-8</sup>2. Macrovascular (coronary, peripheral vascular and cerebrovascular) reduction of risk through smoking cessation and hypertension and lipid control.<sup>9</sup>3. Neurologic and metabolic reduction of risk through glycemia control. According to the recommendations of the European Association for the Study of Diabetes (EASD) and the American Diabetes Association (ADA) for DM2 treatment from place the desire, condition, tolerance and abilities of patient at the dynamic process center.<sup>10,11</sup>The objective of the current study is to assess the Frequency of DM Type 2 and its complications among patients of District Shaheed Benazirabad Pakistan.

### METHODOLOGY

The descriptive cross-sectional study was conducted at the Peoples Medical College Hospital District Shaheed Benazirabad Pakistan Pakistan for the period of Eight months from June 2019 to January 2020. The mentioned Hospital is one of the major hospital providing the medical facilities to the numerous patients of District Shaheed Benazirabad Pakistan. The sample size was collected by using sample purposive technique. The well-structured questionnaire was administered among 384 patients and only 300 properly filled questionnaires were received and those patients were included in the study. In addition to this their medical charts were also taken into the consideration and discussed with the clinical Pharmacist .The verbal consent was sought from the included patients. Patients who had Diabetes Mellitus type 2 were included in the study and patient having disinterest or who were mentally unsound were excluded from the study.

### RESULTS

Results reported that there were 205 (68.33%) males and 95 (31.77%) females (Table 1).

**Table 1: Gender wise distribution of the sample**

GENDER	FREQUENCY	PERCENTAGE (%)
Male	205	68.33
Female	95	31.77

It was found that prevalence of Diabetes Mellitus Type 2 was high 135 (45%) in age group of 61-70 years, where in the age group of 51-60 years it was found in 87 (29%) subjects and 78 (26%) in the age group of 40-50 years (Table 2).

**Table 2: Age wise distribution of the Diabetes Mellitus Type 2**

AGE GROUP	FREQUENCY	PERCENTAGE (%)
40-50 Years	78	26
51-60 Years	87	29
61-70 Years	135	45

Complications and their prevalence was also revealed among the Diabetes Mellitus Type 2 patients, among these complication Diabetic Neuropathy was high in 70 (23.33%) patients, while Diabetic Retinopathy was in 63 (21%) patients, Diabetic Nephropathy was in 28 (9.33%) patients, Hypertension was in 37 (12.33%) patients, Impotence 45 (15%) patients, Gastro paresis was in 22 (7.33%) patients and Stroke was in 35 (11.6%) patients. Chi-square test showed the association of diabetes with complications. (Table 3).

**Table 3: Prevalence of Complications of Diabetic Mellitus Type 2**

COMPLICATION	FREQUENCY	(%)	P-Value
Diabetic Neuropathy	70	23.33	0.049
Diabetic Retinopathy	63	21	0.051
Diabetic Nephropathy	28	9.33	0.070
Hypertension	37	12.33	0.043
Impotence	45	15	0.611
Gastro paresis	22	7.33	0.052
Stroke	35	11.6	0.519

It was also found that there was good glycemic control in 175 (83.33%) patients and poor in 35 (16.66%) patients (Table 4).

**Table 4: Analysis of glycemc control**

GLYCEMIC CONTROL	FREQUENCY	(%)	P-Value
Poor	35	16.66%	0.047
Good	175	83.33%	

## DISCUSSION

Diabetes is the global threat. In the United States the Diabetes prevalence went upto 120% between 1980 to 2010 and the number will further increase upto 2025, and the cost on Diabetes is very substantial incurred upon the individuals and the society and family, the estimated cost of Diabetes augmented from \$ 98 billion in 1997 to \$ 201 billion in 2010. Proof has made it clear that upgrading or increasing the glycemc control and by Diabetic complications reduction will extraordinarily have an influence in significant saving of cost and will enhance the Quality of life. Guidelines aimed to prevent the Diabetes Mellitus, subside the complications and to improve the quality of life are available for both healthcare providers and the patient . Nephrotic disorder patients are at greater infection risk. The hazard is most greater for infection with bacterial (including peritonitis) because of immunoglobulin renal losses and some components. No information, nonetheless, bolster the normal immunoglobulin infusions or prophylactic anti-microbials utilization.<sup>12,13</sup>

Nephrotic disorder patients are at greater infection risk. Both cell mediated and humoral immunity are influenced. immunoglobulin renal losses and some components, just as a reduction in the quantity of lymphocytes T, place patients with nephrotic disorder at most greater risk for infection with bacterial, including peritonitis. The Advisory Committee on Immunization Practices (ACIP) recommend 13-valent pneumococcal conjugate antibody (PCV13) immunization trailed by a 23-valent pneumococcal polysaccharide immunization (PPSV23) dose for eight weeks later in nephrotic disorder patients. For the last two decades the emphasis of the community pharmacies has turned very smoothly from the product centered approach to the patient centered activities .This resulted due to the increasing awareness that not only the well quality of product is sufficient alone but the pharmacotherapy is also very vital in the

effectiveness and the safety.<sup>14,15</sup> These kind of the topics like the medication surveillance and patient education on compliance has found a lot value in routine practice in tertiary care hospitals of KPK.<sup>16</sup> As the result of this shift and the impact of Diabetes Mellitus on general Health of the masses created more curiosity in the interventions involving the pharmacist in the Diabetes care has substantially enhanced. It has been widely witnessed that Pharmacist intervention is mandatory in cost effectiveness and overall quality of life of the patient.

## CONCLUSION

The number of patients who had poor Glycemc control were suffering from the Diabetes Mellitus and its' triggered complications.

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