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CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF HOSPITALIZED PATIENTS WITH DIABETES MELLITUS

Introduction

Diabetes mellitus is a chronic metabolic disorder associated with long-term microvascular and macrovascular complications. Understanding treatment patterns and complication rates helps improve clinical management and preventive care. Diabetes mellitus represents a significant and growing global health burden, with its prevalence reaching epidemic proportions worldwide. Characterized by chronic hyperglycemia and associated metabolic disturbances, the condition is a major contributor to morbidity and mortality, primarily through its microvascular and macrovascular complications. The clinical and economic impact of diabetes is particularly pronounced in the hospital setting, where patients with DM are frequently admitted for a variety of reasons, including acute metabolic derangements, cardiovascular events, infections, and complications related to chronic ulcers or surgical procedures [1].

Hospitalized patients with diabetes present a unique and complex challenge to healthcare systems. They often exhibit longer lengths of stay, higher rates of readmission, and increased healthcare costs compared to their non-diabetic counterparts. In recent years, the prevalence of diabetes and its complications has increased due to sedentary lifestyles and aging populations. This study aims to describe demographic patterns, treatment practices, and complication rates among diabetic patients in a clinical setting [2].

Goal

To study the distribution of diabetes types, duration of disease, drug use, and complications among hospitalized diabetic patients.

Material and methods of research

A descriptive cross-sectional study was conducted on 35 diabetic patients at Gomel State Clinical Hospital No3. Data on age, gender, diabetes type, duration since diagnosis, treatment (insulin vs. non-insulin), and complications were recorded. Descriptive statistics were used to summarize findings, and results were expressed as frequencies and percentages.

The demographic characteristics of the study population were analyzed, revealing a total of 35 enrolled patients. There is notable gender distribution, comprising 15 males, which constituted 42.9% of the group, and 20 females, representing a majority at 57.1%. Regarding age, the participants had a mean age of 59.7 years, indicating a predominantly middle-aged to older adult sample. The age range was particularly broad, spanning several decades from a minimum of 24 years to a maximum of 84 years.

This wide dispersion suggests considerable heterogeneity within the patient group, encompassing both younger and elderly individuals. Such diversity in age is valuable for understanding the potential effects or characteristics of the condition across different stages of life.

The results of the research and their discussion

A cross-sectional study was conducted on 35 diabetic patients who were hospitalized. Data were extracted from patient records and interviews.

Demographics: 35 patients (20 females, 15 males); mean age 59.7±14.2 years (range 24–84).

Type 2 DM was most common (26 patients, 74.3%), followed by Type 1 DM (5 patients, 14.3%), Gestational DM (2 patients, 5.7%), Prediabetes (1 patient, 2.9%), and Unspecified (1 patient, 2.9%). Treatment pattern: 17 patients (48.6%) were on insulin therapy, while 18 (51.4%) managed without insulin. Duration of disease: Majority had diabetes for 6–20 years (51%), while 20% had >20 years of disease. Complications: 11 patients (31.4%) developed diabetic complications, including diabetic foot (4 cases, 11.4%), retinopathy (1 case, 2.9%), and limb amputations (6 cases, 17.1%). Complications were more prevalent in those with >10 years of diabetes duration.

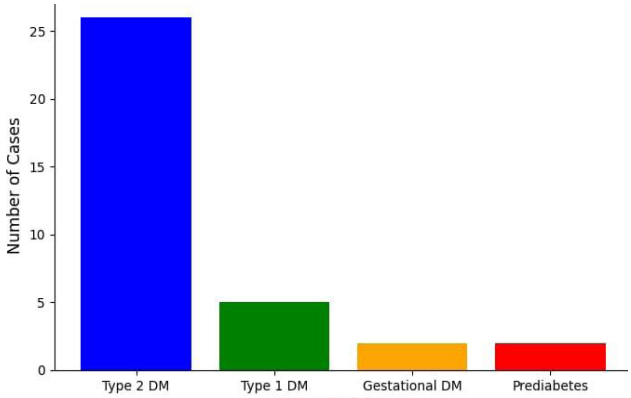


Figure 1 – Type of Diabetes

Type 2 diabetes predominates (74.3%), reflecting global trends, while type 1 diabetes (14.3%) and other types constitute smaller proportions of the study population.

The duration since diagnosis among patients with Diabetes Mellitus. Only a small proportion of patients, 1 individual (2.9%), had been diagnosed for less than one year, indicating that newly diagnosed cases were minimal in this group. A moderate number of patients, 8 (22.9%), had a disease duration of 1–5 years, while the largest group consisted of 10 patients (28.6%) with a duration of 6–10 years, suggesting that most individuals were in the mid-course of the disease. Similarly, 8 patients (22.9%) had been living with diabetes for 11–20 years, and 7 patients (20.0%) had a long-standing duration of more than 20 years, reflecting a significant proportion with chronic disease exposure. The mean duration of diabetes was 11.3 years, indicating that, on average, patients had long-term disease, which is clinically important as the risk of complications increases with prolonged duration.

Treatment is nearly equally divided between insulin users (48.6%) and those on oral agents alone (51.4%), reflecting the progressive nature of diabetes requiring insulin over time. The treatment patterns among patients with Diabetes Mellitus. It shows that 17 patients (approximately 48.6%) were receiving insulin therapy in some form, indicating either advanced disease, poor glycemic control, or specific clinical indications requiring insulin use. Meanwhile, a slightly higher proportion, 18 patients (51.4%), were managed with non-insulin or oral hypoglycemic agents alone, suggesting that many patients had relatively stable or early-stage disease that could be controlled without insulin. Overall, the data indicate a fairly balanced distribution between insulin-dependent and non-insulin-dependent management, with a slight preference for oral therapy, which is typically the first-line approach in the management of type 2 diabetes [1].

The distribution of complications among patients with Diabetes Mellitus. Among the reported cases, diabetic foot was observed in 4 patients (11.4%), reflecting the impact of peripheral neuropathy and vascular insufficiency commonly seen in diabetes. Retinopathy was relatively rare, occurring in only 1 patient (2.9%), though it remains a significant microvascular complication that can lead to vision impairment if not detected early. Notably, amputation of any type was reported in 6 patients (17.1%), indicating a severe disease outcome often associated with advanced Diabetic foot and poor glycemic

control. However, the majority of patients, 24 individuals (68.6%), had no reported complications, which may suggest adequate disease management, early-stage diagnosis, or possible underreporting. Overall, the data emphasize the importance of early screening, proper glycemic control, and preventive care to reduce the risk of serious complications, particularly those leading to amputation.

Conclusions

This study confirms that Type 2 DM is the most prevalent form, consistent with global. Data showing that Type 2 accounts for 85–95% of cases worldwide. The mean age of 59.7 years. Reflects that diabetes largely affects middle-aged and elderly populations. Almost half of patients (48.6%) were on insulin, showing that many cases required intensified therapy, possibly due to Poor glycemic control or long disease duration.

Type 2 DM predominates (74.3%) among patients. Nearly one-third develop complications, mainly diabetic foot and amputations. Complications correlate strongly with disease duration (>10 years). Strengthening early screening, diabetic education, and physiotherapy can reduce complication rates.

LITERATURE

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PREVALENCE, CLINICAL CHARACTERISTICS AND MANAGEMENT OF DIABETES MELLITUS AMONG BELARUSIAN AND INDIAN PATIENT POPULATIONS: A COMPARATIVE CROSS-SECTIONAL STUDY

Introduction

Diabetes mellitus affects an estimated 537 million adults worldwide, yet its clinical presentation and burden vary across populations. India, home to more than 77 million people with diabetes, frequently shows earlier onset at lower BMI, often described as the "South Asian phenotype". In Belarus (estimated adult prevalence 5–7%), diabetes is commonly accompanied by a high cardiovascular comorbidity burden. However, direct comparative patient-level data between these two settings remain limited. This study uses two parallel questionnaire datasets to compare clinical characteristics, treatment patterns, and patient-reported burden.

Goal

To compare diabetes mellitus characteristics between Belarusian and Indian respondents using two parallel questionnaire-based datasets.

Material and methods of research

A cross-sectional comparative survey was conducted among 80 respondents (India, n=49; Belarus, n=31). Analyses of diabetes-related clinical parameters were performed in respondents reporting a diabetes diagnosis (India, n=42; Belarus, n=31). Data were collected using structured