

Practice and Attitude of Patients with Diabetes Mellitus and Hypertension Towards COVID-19 and Impact of the Pandemic on Their Chronic Disease Management

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Introduction

A novel coronavirus has firstly emerged in December 2019 in China and spread to all over the world [1]. Several reports from China, Italy and the United States elaborated that older age and the presence of one or more underlying chronic health conditions are considered risk factors for developing severe disease caused by COVID-19 [2-4]. Ever since, these vulnerable groups of people should reach helpful information resources and healthcare services.

The relation between COVID-19 and chronic diseases is bidirectional which means that they affect each other in both directions. Therefore, they should be not only be aware and knowledgeable but also able to keep controlling and managing their chronic conditions and willing to practice preventive measures such as washing hands properly, wearing facemasks, and practicing social distance.

Few studies addressed the effect of the pandemic and related curfew on the management, control, and follow-up of patients with diabetes mellitus and hypertension.

Objectives

The current study aims to assess the practices and attitudes of patients with diabetes mellitus and/or hypertension toward the current COVID-19 pandemic and to measure its impact on the management of their chronic health conditions and adequate delivery of healthcare services.

Materials

An observational cross-sectional study design was conducted to assess the knowledge, perception, and attitude by using an anonymous web-based questionnaire among patients with diabetes mellitus and/or hypertension towards COVID-19 in the Eastern province in the Kingdom of Saudi Arabia.

Inclusion criteria are adult male and female patients of age 18-65 years who have been diagnosed with hypertension and/or diabetes mellitus, with or without a history of coronavirus infection by COVID-19. We excluded patients with severe, non-correctable cognitive, visual, or hearing impairment. All statistical analyses were done by using the Statistical Package for Social Sciences (SPSS) version 26.0.

Results

Among 393 studied patients, most patients aged 21-50 years (53.7%) while (31.8%) aged 51-65 years. Exact of 207 (52.7%) patients were females, and (47.3%) were males. Among participants, 143 (36.4%) have diabetes mellitus, 154 (39.2%) have hypertension, and 96 (24.4%) have both diabetes and hypertension. The most-reported diabetes type was type II diabetes (65.9%; 153).

Regarding the history of covid-19 infection, only 109 patients (27.7% of the total group) had COVID-19 like symptoms in the past 6 months of study. Of this number, 67 patients (61.5%) did isolate themselves and an exact of 66 patients (60.6%) had been confirmed with positive COVID 19 swab tests.

An approximate of 90 % of the total group stick to different recommendations, and precautions of infection control including hand hygiene, wearing a facemask, and social distancing.

Regarding the effect of the pandemic on their chronic condition, 35.1% of patients thought that the pandemic affected their commitment to taking necessary treatment of their chronic disease. Furthermore, 39.2 % thought that they could not maintain good control of their blood pressure and diabetes during the pandemic.

Interestingly, 56.7% kept committed to their regular appointments during the pandemic. Of the patients that have been committed to their appointments, 60 patients (26.8%) used the virtual meeting to consult their healthcare providers. An exact of 30 patients (7.7 %) needed surgical intervention during the curfew of them 18 patients had been delayed due to the circumstances of the hospitals during the pandemic. An exact of 95 patients (24.1 %) stated that they had to visit the emergency room for conditions related to their chronic disease. As regards the effect of the pandemic on their psychological health or daily life, only 31% reported that the pandemic hasn't any effect .

As regards effects of the COVID-19 pandemic on study participants in each category, a total of 239 (60.8 %) patients reported that they were able to maintain the level of blood sugar or blood pressure within the required range (99 patients of the diabetic group, 96 patients of the hypertensive group and 44 patients of both DM and HTN). Exact of 223 (56.7%) of the patients were able to keep track of their appointments regularly (92 of diabetics, 79 of hypertensive, and 52 of both DM and HTN; P=.065). The most method used to keep communication was through visiting the physician clinic physically (73.2%; 77.4% for diabetics, and 67.1% of hypertensive; P=0.296) (Figure 1).

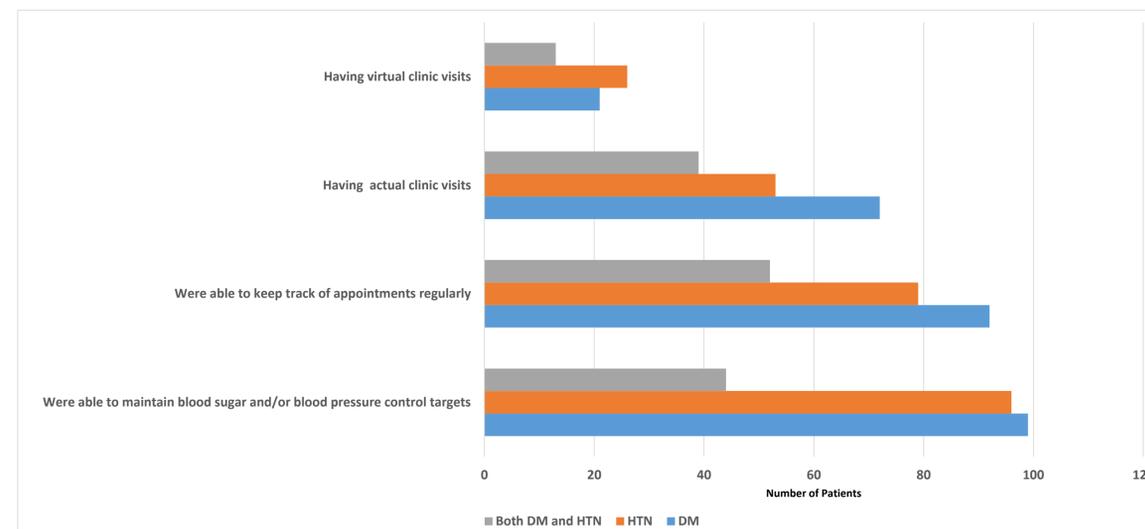


Figure 1. Effect of the COVID-19 pandemic on delivery of healthcare services and achievement of disease control targets among different patient categories

DM: Diabetes Mellitus HTN: Hypertension

Conclusion

Patients with chronic diseases including diabetes mellitus and hypertension are compromised groups regarding COVID-19 infection. Nearly 16.6 % (66 patients) of our patients has been confirmed with COVID-19 infection. Approximately 90% of our total group sticks to different recommendations and precautions of infection control including hand hygiene, wearing a facemask, and social distancing.

The pandemic has negatively affected patients as 35.1% of patients thought that it affected their commitment to taking their necessary treatment. Furthermore, 39.2 % thought that they could not maintain good control of their blood pressure and diabetes during the pandemic. On the other hand, 56.7% kept committed to their regular appointments during the pandemic. Of the patients that have been committed to their appointments, 26.8% used the virtual meeting to consult their healthcare providers. We recommend special care for patients with chronic conditions including diabetes mellitus and hypertension as well as more spread of the telemedicine services.

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