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Keywords: COVID-19; Risk of hypertension; Afghan participants; A quantitative descriptive research

Introduction

Blood pressure normally rises and falls throughout the day, but it can damage your heart and cause health problems if it stays high for a long time [1]. An estimated 26% of the world population (972 million people) has hypertension is expected to increase by 29% by 2025 worldwide [2].

been inadequately investigated, and probable blood pressure target value in these patients is still unknown [16,17]. According to reports in Afghanistan, hypertension has been widely reported in COVID-19 among all ages. To the best of our knowledge, there if no study revealed the association of hypertension with COVID 19 among the adult population in Kabul, Afghanistan. erefore, we aimed to investigate the association between hypertension and the risk of COVID 19 in Kabul (Table 1).

Variables		Frequency	Percentages
Gender	Male	65	65.31%
	Female	33	34.69%
Age	1-35 years old	1	1.1%
	36-50 years old	22	22.4%
	51-70 years old	66	67.3%
	Above 70 years old	9	9.2%
Hypertension level	Primary hypertension	29	29.6%
	Secondary hypertension	65	66.3%
	Pro-hypertension	4	4.1%
Test	[illegible]	[illegible]	[illegible]

Statistical analysis

e data has been collected from 98 hospitalized patients from two

Results

e study population consisted of 98 adult hypertension patients with COVID-19 infections. According to our analysis, demonstrated that in these 98 hospitalized patients 65 (65.31%) were male and 33 (34.69%) were females. Our research revealed that 29.6% of participants had primary hypertension. e 66.3% and 4.1% of the population had secondary and pro hypertension. e table shows that (96.9%) of patients had a cough and only (3.1%) didn't have a cough while having COVID-19 and hypertension. e data analysis shows that (94.9%) have experienced fever the analysis proves that (91.8%) have su ered from headaches. It is already clear that headache is the sign of both COVID-19 hypertension, e data analysis illustrates that (72.2%) have experienced fatigue (tiredness) which is a common symptom of hypertension, e analysis explains that (88.8%) have experienced Sepsis the most numbers of signs are in secondary hypertension., e result of this COVID-19 with hypertension was signi cantly older and was more likely to have essential Comorbidities including ARDS (acute respiratory distress syndrome), cardiovascular disease, renal failure, and SOB (shortness of breath), and the result shows that more people have got hypertension a er COVID-19 positive. Patients with hypertension tended to have a long time from start to admission and have higher positive COVID-19 PCR detection rates. Table 4 shows that (41.84%) of patients had before their COVID-19 PCR test result is positive and (58.16%) of patients found hypertension a er they have known that their PCR result comes positive.

Variable	Frequency	Percentage
Pre COVID-hypertension	41	41.84%
Post-COVID hypertension	57	58.16%

Table 4: Variable Hypertension estimate

Our study population consisted of 98 adult hypertension patients with COVID-19 infections. Analysis shows that in these 98 hospitalized patients 65 (65.31%) were male and 33 (34.69%) were females; the data analysis shows that (94.9%) have experienced fever the analysis proves that (91.8%) have su ered from headaches. And it is already clear that headache is the sign of both COVID-19 hypertension, data analysis illustrates that (72.2%) have experienced fatigue (tiredness) which is a common symptom of hypertension, and symptomizes explain that (88.8%) have experienced Sepsis the harvest numbers of signs are in secondary hypertension. Additionally, the result demonstrated that more people have got hypertension a er COVID-19 positive, and patients with hypertension tended to have a long time from start to admission and have higher positive COVID-19 PCR detection rates.

According to recent studies, a cross-sectional study in the American College of Cardiology (ACC) revealed that emerging data from various countries most a ected by coronavirus disease 2019 (COVID-19) reveal that hypertension is strongly associated with poor clinical outcomes [18]. Guan et al. reported data from 1099 patients with con rmed COVID-19, of which the single highest risk factor of infection was hypertension reported in 15% of patients. Among patients who developed the severe disease (173 patients), the most common co-morbidity was hypertension (23.7%), and 35.8% of the patients requiring intensive care unit (ICU) admission or mechanical ventilation or who died also had hypertension [19]. Zhang et al. studied 140 patients with COVID-19 and found that 30% of all patients and 37.9% of those with severe disease had hypertension [20]. As well, a review study reported that 23.7-30% of patients were admitted with the infection and were linked to a more severe infection. Data from Italy looking at patients admitted to the ICU showed 49% (509/1043) had hypertension [21].

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Our study has several strengths, this is the rst study in Afghanistan to demonstrate the association between hypertension and COVID-19" among Afghan patients. Without any hesitation, we collect the data from patients so that no one falls sick. As well, we have found signs and symptoms of both hypertension and COVID-19 in Afghanistan. On the other hand, our study has several limitations, As we wanted to do some tests like D. dimer, HBA1C, Urea, creatinine, and many more during hypertension of a patient but there was a lack of facilities to do all these works. e data has been collected from 98 patients who wanted to collect more data but due to political situations here in Afghanistan, I couldn't able to collect more data. As we couldn't collect more data due to the e ect of COVID-19 on people in Afghan society.

Impact of patient characteristics on EHP-30

A lower BMI was positively associated with "emotional health" (rs=0.251, p=0.007) and "self-image" (rs=0.245, p=0.008). ere was a signi cant negative correlation between partnership status and the emotional health (n)42,2, ± 22,0 (t) sa bueive 8 (g h)23 liens4 (e e)-8 (ov (u)3e)-6 (3 li)12 in 3 (e)103 (e)(.)]TJ/T3 (fg)-7 (h)39 (e)-4(er 49I wa)0(ega)19 ()6 (eg)3nmp3sOVID-19

interest.

Ethical Approval Statement

is study was ethically approved by the medical bioethics committee of the SIHE ethics committee (code: 1386-1409). e patients/participants provided their written informed consent to participate in this study.

Author Contributions

UN, HS, and AS were involved in the study's conception, design, statistical analysis, and interpretation of the data. NAS, RK, AR, AS, and RR were involved in data collection, data cleaning, statistical analysis, and manuscript dra ing. AMB supervised the study. All authors approved the nal manuscript for submission.

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