RESEARCH ARTICLE

Patients visiting gastroenterology clinics avoid giving honest history for COVID-19 related symptoms in the pre-clinic triage

Abeer Altaf,[1] Zaigham Abbas,[2] Bushra Shahid,[3] Muhammad Ali Qadeer,[4] Shoukat Ali Samejo,[5] Mehreen Siyal[6]

Abstract

Objective: To assess the discrepancy in terms of history related to coronavirus disease-2019 and symptoms given in the pre-clinic triage and to the doctor attending the patient in a gastroenterology clinic.

Method: The observational study was conducted from September 2020 to January 2021 at the Gastroenterology outpatient department of Dr Ziauddin Hospital's Clifton unit in Karachi, and comprised all patients visiting the facility regardless of age and gender. Data was collected using a questionnaire that was first filled up by the receptionist outside the clinic and was then administered again once the patient entered the clinic. Discrepancy on the answers was then checked and associations were determined with clinical assessment. Data was analysed using SPSS 20.

Results: Of the 300 patients, 184(61.3%) were males and 116(38.6%) were females. The overall mean age was 55 ± 16.98 (range: 18-92 years). Discrepancy between pre-clinic and in-clinic self-reported data was significant for fever, cough, fatigue, headache, body ache, diarrhoea, sore throat, loss of sense of smell/taste, shortness of breath, and contact with someone positive for coronavirus disease-2019 was significant ($p<0.05$).

Conclusion: Patients were found to be afraid of getting barred from seeing a consultant, had fear of hospital-based isolation or were in denial regarding the pandemic.

Keywords: COVID-19, Triage, Questionnaire, Screening, Symptoms. (JPMA 72: 1572; 2022)

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Introduction

The emergence of the coronavirus disease-2019 (COVID-19) was first noted in the Huanan Market in Wuhan, China, in late 2019.[1] The infectious virus has affected more than 100 million people worldwide and has been the cause of death of more than 2.5 million infected individuals.[2] COVID-19 spreads primarily through respiratory droplets and secondarily through physical contact. Its usual clinical manifestations in the general population are dry cough, fever and flu-like symptoms which can develop into acute respiratory distress syndrome (ARDS) and multiorgan failure.

To curb its spread in January 2020, extreme quarantine measures were taken, including sealing of large cities, closing of borders, and confining people to their homes. However, by that time much damage had already been done, as human-to-human transmission became evident, and on March 11, 2020, the World Health Organisation (WHO) declared COVID-19 a global pandemic.[3]

Because of the fears and taboos related to COVID-19 infection, it has been observed that patients tend to avoid giving exact history related to their symptoms and exposure. Many patients are afraid that they will be denied access to the doctor. Others are afraid that the healthcare facility will ask for a COVID-19 test and they will be reported to the healthcare authorities and put in quarantine. However, when they get the opportunity to see their doctor, they do share their symptoms and fears. The current study was planned to assess the discrepancy between the COVID-19-related history and symptoms given in the pre-clinic triage and to the doctor attending the patients in a gastroenterology clinic.

Subjects and Methods

The observational study was conducted from September 2020 to January 2021 at the Gastroenterology outpatient department (OPD) of Dr Ziauddin Hospital's Clifton unit in Karachi. After approval from the institutional ethics review committee, the sample size was calculated using the online Raosoft calculator[4] with 95% confidence interval (CI) and estimating that there would be 1,500 patients over 5 months in the said OPD. All patients attending the clinic were included regardless of age and gender. Patients and attendants who come for only report review after the initial visit were excluded. Consent was taken from all the patients.

A questionnaire was prepared to comprise basic patient data, history of COVID-19 exposure and symptoms (Annexure). The clinic receptionist first asked the patient regarding COVID-19 history and exposure before entering the clinic. To control potential confounders, the same pre-filled form was then

[1,2,4-6]Department of Hepatogastroenterology, [3]Department of Internal Medicine, Dr. Ziauddin Hospital, Karachi, Pakistan.

Correspondence: Abeer Altaf. Email: abeeraltaf.98@gmail.com

Annexure: Survey form.

Dr. Ziauddin Hospital
Clifton Campus

To prevent the spread of COVID-19 and reduce the potential risk, we are conducting a simple screening questionnaire. Your participation is important to help us take precautionary measures to protect you and everyone in this building. Thank you for your time.

Name/MR number:

SYMPTOMS

What are your symptoms?

- ☐ Fever
- ☐ Cough (new or worsening)
- ☐ Fatigue (new tiredness doing normal activities)
- ☐ Body aches
- ☐ Headache
- ☐ Diarrhoea
- ☐ Sore throat
- ☐ Loss of smell or taste
- ☐ Shortness of breath
- ☐ None of the above

CONTACT HISTORY

- ☐ Someone in my home / my close contacts is a confirmed or probable COVID-19 patient
- ☐ I have public dealing e.g. shopkeeper, or hospital workers
- ☐ In the past 14 days, I have attended a large religious or social gathering (e.g. ijtima, wedding, rally etc.)
- ☐ I have come to Pakistan from abroad in the last 14 days
- ☐ Someone in my home / my close contacts has come from outside Pakistan in the last 14 days I have come to Pakistan from abroad in the last 14 days
- ☐ None of the above

provided to the doctor with the patient's file. The doctor asked the same questions before taking the patient's relevant history and while encouraging them to answer the questions honestly. Simultaneously, the information provided in the triage was verified and discrepancies were marked. The discrepancy in history was then assessed and compared with results of either COVID-19 polymerase chain reaction (PCR) or serology testing.

Data was analysed using SPSS 20. Continuous variables were expressed as mean and standard deviations, while categorical data was expressed as frequencies and percentages. Discrepancies were analysed using the McNemar's chi-square test. P<0.05 was taken as statistically significant.

Results

Of the 300 patients, 184(61.3%) were males and 116(38.6%) were females. The overall mean age was 55 ± 16.98 (range: 18-92 years). Discrepancy between pre-

Table-1: COVID-19 symptom and exposure discrepancy in patients.

Variable	Confessed at triage		Confessed in the clinic		Discrepancy	p-value
	N	%	N	%	N (%)	
Fever	3	15.7%	16	84.2%	13 (81.2%)	<0.001
Cough	12	33.3%	24	66.6%	12 (50%)	<0.001
Fatigue	0	0%	18	100%	18 (100%)	<0.001
Body ache	15	26.7%	41	73.2%	26 (60.4%)	<0.001
Headache	8	36.3%	14	63.6%	6 (42.8%)	<0.001
Diarrhoea	18	43.9%	23	56.1%	5 (21.7%)	<0.001
Sore throat	2	15.4%	11	84.6%	9 (81.8%)	0.001
Loss of smell/taste	1	20%	4	80%	3 (75%)	0.013
Shortness of breath	3	16.6%	15	83.3%	12 (80%)	<0.001
Contract history	2	22.2%	7	77.7%	5 (71.4%)	<0.001
Public dealing	15	32.6%	31	67.4%	16 (51.6%)	<0.001
Public gathering	2	18.1%	9	81.1%	7 (77.7%)	0.001
Travelling history	74	50%	74	50%	0 (0%)	-
Positive contact with suspected traveller	1	33.3%	2	66.6%	1 (50%)	0.001

COVID-19: Coronavirus disease-2019.

Table-2: Covid-19 symptom and exposure history discrepancy correlating with testing done and results.

Variable	Testing done		P-value	Serology		P-value	PCR		P-value
	Yes	No		Positive	Negative		Positive	Negative	
Fever	5	8	0.004	3	0	<0.001	1	2	0.001
Cough	4	7	0.11	1	0	<0.001	1	2	0.001
Fatigue	5	13	0.05	1	0	0.06	1	4	0.02
Body ache	9	17	0.02	3	1	<0.01	2	5	0.001
Headache	1	5	0.66	0	0	0.001	0	1	0.001
Diarrhoea	2	3	0.18	0	0	0.15	0	2	0.01
Sore throat	1	8	1.00	1	-	<0.001	0	0	<0.001
Loss of smell/taste	0	3	1.00	0	0	0.006	0	0	0.001
Shortness of breath	5	5	0.04	2	1	<0.001	2	1	<0.01
Positive contact history	3	2	0.18	1	0	0.07	1	1	0.005
Public dealing	1	15	0.48	0	0	0.08	0	1	0.09
Public gathering	2	5	0.32	1	0	<0.001	1	0	<0.01
Travel history	49	25	-	9	3	-	5	40	-
History of contact with the traveller	0	1	1.00	0	0	0.25	0	0	0.26

COVID-19: Coronavirus disease-2019, PCR: Polymerase chain reaction.

clinic and in-clinic self-reported data was significant for fever, cough, fatigue, headache, body ache, diarrhoea, sore throat, loss of sense of smell/taste, shortness of breath, and contact with someone positive for coronavirus disease-2019 was significant ($p<0.05$). The only piece of data without any discrepancy was travel history (Table-1).

COVID-19 testing results in individuals with discrepancy showed significant difference in positivity for all parameters except for fatigue, diarrhoea, positive contact history and loss of taste/smell for serology, and public dealing for both serology and PCR ($p>0.05$), while none of those with contact history with a suspected traveller agreed to get tested (Table-2).

Discussion

The costs of COVID-19 are not just limited to medical aspects, as the virus has led to significant sociological, psychological and economic effects globally. The COVID-19 pandemic has created an unprecedented panic in the mind of the people. Anxiety caused by lockdowns, the many unknowns around COVID-19 and the fear of being infected has given rise to stigma in local communities. It has significant implications for psychological health and has given rise to additional public health challenges. These include fear, stress, anxiety, depression, frustration, distress and social isolation, which are associated with poor mental health outcomes. COVID-19 has all the elements of stigma.[5] People have modified their actions because of the fear of discrimination by avoiding testing for severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), have fear of being rejected by family members, and some patients might have feelings of self-rejection. A stigmatised community seeks medical care late and hides important medical history. This behaviour, in turn, leads to two consequences: firstly, delay of treatment for patients in critical conditions, and, secondly, under-detection of infected individuals which lead to an increased rate of transmission which poses a serious threat to the lives of healthcare workers, patients and survivors of the disease.[6,7]

Erving Goffman, a Canadian sociologist, once described social stigma as an attribute or quality of an individual due to which he/she is deemed "the undesirable other" by society.[8] History is evident that social stigma and illness go hand in hand. In the 18th century England, Mary Malon became infamous as "Typhoid Mary", and was guilty of spreading typhoid, a blame which was later proved to be false, but her name is still referred to as such in textbooks.[9] Societal behaviours like "othering" creates a "we versus they" social scenario and leads to discrimination and blame against those on the opposite end of the spectrum. This very societal attribute is heightened during a pandemic. Due to COVID-19 being a relatively new disease with incredibly fast transmissibility and mortality, myths and rumours around the disease and those suffering from it emphasised the idea of "othering", causing increased fear and anxiety among the general public. This can be counterproductive in the treatment and prevention of the disease.

The primary intention of the current study was to assess the discrepancy of COVID-19-related history and symptoms given in pre-clinic triage and to the doctor attending the patient in the GI clinic. Body ache was the most common symptom admitted by the patients (13.6%), which was followed by cough (8%) and diarrhoea (7.6%). Studies done previously showed that these

symptoms were most commonly found in patients with mild COVID-19.[10] Diarrhoea also had the least discrepancy as the study was conducted in a GI clinic and diarrhoea was a predominant symptom. Other symptoms, like fever, shortness of breath (SOB) and fatigue, were also reported.

Exposure history was also taken as part of COVID-19 pre-clinic triage and travel history was the most common (24.66%), as many patients admitted to having travelled from other cities for doctor's appointments. A few patients also agreed to have had done public dealing, attended some public gathering, and had contact with a COVID-19-positive patient in the immediate past. Exposure history, when reviewed inside, also revealed discrepancies in public gathering (77.77%), contact history with positive patient (71.42%), public dealing (51.61%), contact history with the traveller (50%), and the scale of discrepancy was significant ($p<0.05$).

Once the patients were inside the clinic, there was much higher admittances to symptoms. The highest discrepancy was noted for fatigue (100%), followed by fever, sore throat, shortness of breath, anosmia, body ache, cough and diarrhoea ($p<0.05$ each).

Clinical evaluation of all patients with positive symptomatology, whether inside or outside the clinic, was done by the doctor, and the suspected individuals were then asked for COVID-19 testing. Patients have to be carefully selected and counselled to get tested to normalise the idea of COVID-19 testing and emphasising its importance in a society where the number of the population accepting the disease and getting tested is small due to social stigmata,[11] risk of financial burden in low socioeconomic groups[12] and lack of testing facilities.[13]

Among the patients who got tested for COVID-19, 9 had positive evidence of antibodies, 5 had COVID-19 detected in the nasopharyngeal swab by PCR, and 2 had evidence of pulmonary infection in chest X-rays (CXRs). When correlating the testing with triage and discrepancy history, all showed statistical significance, pointing to the fact that patients agreeing to the history of COVID-19 inside the clinic were more and led positive testing as well. This shows that honest history alone can be a powerful tool in recognising, testing, isolating and treating individuals with a higher level of suspicion for the disease.

The current study has its strengths. Firstly, COVID-19 since its emergence has complicated previously simple daily routine activities. The provision of services, both medical and non-medical, has become difficult. A history-based method of triaging patients and cross-checking outside and inside the clinic helped to stratify which patients required COVID-19 testing. Secondly, due to increased social stigmata, patients who refused initially, thinking they would not be able to have a consult with the doctor, were entertained in the clinic and were given equal time, giving them psychological comfort that they were not being marginalised. This exercise eventually encouraged the patients to agree to share symptoms and contact history and then to get tested promptly. Thirdly, as more patients were agreeing to get themselves tested, that helped to see a better clinical picture of the COVID-19 burden in the community.

The current study has its limitations as well. Firstly, patients visiting the gastroenterology clinic often had complaints of nausea, vomiting, fever and diarrhoea. COVID-19 being primarily a respiratory pathogen had symptoms parallel to gastroenterology symptoms as well. This often created confusion as to whom to send for testing as sending every patient with diarrhoea for COVID-19 was not a practical approach, especially in a resource-deprived country. Secondly, some patients preferred to get tested from outside, and nothing is known about whether or not they got isolated or followed up with a respiratory clinician because the country lacks a national healthcare directory. Also, some patients did not agree to any symptoms or contact both outside and inside the clinic created an important confounding factor for the decrease in admittance.

Conclusion

History-based screening for COVID-19 testing should be routinely done across all departments to get an accurate disease burden among patients visiting the hospital. Patients should be encouraged to give honest responses both regarding symptoms and exposure, as that can help with both treatment and curbing the pandemic's spread. As such, psychological and social preparedness related to COVID-19 carries global importance, and due care needs to be taken to erase the stigma associated with the disease to prevent its spread.

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