To Study the Prevalence of Covid 19; Symptoms and Risk Factors In Post Covid 19 Patients in Pathanamthitta, Kerala

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Abstract

The knowledge, attitude and practice regarding the post Covid patients are assessed here to improve basic health care needs for a better future and good health. The primary objective was to study the prevalence of covid-19 symptoms and risk factors in post Covid patients. This study was an observational cross sectional study which includes 500 participants and the study was carried out in Eraviperoor Gramapanchayat from Pathanamthitta district. In this study maximum respondents were under the age category 18-35 years. Most of the post Covid patients in our study were graduated and employed. Majority of the patients took 2 weeks to get recovered. Majority of the people used mask and sanitizer as protective measures. The symptoms commonly found were cough, headache and loss of taste/smell. Many of the people had worry about

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the spread of disease.

Keywords

COVID - 19, Observational cross sectional study, Post Covid.

Introduction

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered SARS coV-2. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness[1]. SARS-CoV-2 is one of seven types of corona virus, including the ones that cause severe diseases like Middle East Respiratory Syndrome(MERS) and sudden acute respiratory syndrome(SARS). The other corona viruses cause most of the colds that affect us during the year but are not a serious threat for otherwise healthy people[2].

Risk Factors

Anyone can get covid-19 and most infections are mild .The elderly people have higher chances of serious illness mainly if one of the health condition is presented: Chronic kidney disease, COPD, weakened immune system because of an organ transplant, obesity, some heart conditions such as heart failure, coronary artery disease, sickle cell disease, diabetes mellitus.[3]

Some health conditions that lead to severe COVID-19 Moderate to severe asthma, high blood pressure, cystic fibrosis, pregnancy, dementia, liver diseases, damaged or scarred lungs, smoking, thalassemia, type 1 diabetes.For the children and teens who are at the hospital with COVID-19 have an inflammatory condition called multi system inflammatory syndrome in children. It causes symptoms similar to that of toxic shock and of Kawasaki disease.[4]

Symptoms

Fever, coughing, shortness of breath, trouble breathing, fatigue, chills, body aches, headache, sore throat, congestion/runny nose, ongoing chest pain or pressure, bluish lips or face, strokes also have been reported.[5]

More common symptoms include: Fever, shortness of breath, cough, fatigue, chills. Less common symptoms include: Repeated shaking with chills, sore throat, headache, muscle aches and pains, loss of smell and taste, a runny or stuffy nose, gastrointestinal symptoms like diarrhea, nausea and vomiting, discoloration of fingers or toes, pink eyes, rashes.[6]

Symptoms associated with different systems of body

Central nervous system: Headache, altered behaviour, seizure, stroke associated with severe disease.

Respiratory system

Upper respiratory tract infection, pneumonia, ARDS, secondary pulmonary embolism, hypoxia, pneumomediastinum, pulmonary thromboembolism.

Gastrointestinal system and liver

Anorexia, nausea, diarrhoea, liver failure, drug induced liver injury

Oto

Rhinologic and ophthalmic system: Anosmia with dysgeusia, keratoconjunctivitis, acute otitis media

Cardiovascular system

ARDS associated with arrythmias, sepsis associated heart diseases, myocardial infarction and sudden cardiac death.

Peripheral nervous system

Critical illness neuropathy, critical illness myopathy, drug induced neuropathy or myopathy

Miscellaneous: Local and systemic venous thromboembolism, immune thrombocytopenic purpura, glomerulopathy, kawasaki like disease in children.

Methodology

The study was designed as an observational prospective study to determine the prevalence of COVID-19 symptoms, and risk factors in post Covid patients in Eraviperoor Gramapanchayath. The study was carried out in 500 subjects and the data was collected using a structured questionnaire that contained various questions to meet the objectives.

Objectives

➤ To study the prevalence of COVID-19 symptoms in post Covid patients

➤ To study the prevalence of COVID -19 risk factors in post Covid patients

Duration of the Study: 6 months

Sample Size: The sample size is 500.

Result and Discussions

Inclusion Criteria

➤ Post Covid patients

Exclusion Criteria

➤ People who are not affected by corona virus

➤ People who are not willing to participate

Brief Procedure of the Study

An observational prospective study of 6 months on the topic prevalence of covid-19 symptoms, risk factors in post covid-19 patients in Pathanamthitta was conducted after getting approval from Institutional Ethics Committee. All patients who fulfil the inclusion and exclusion criteria will be selected for the study. Patient data collection form was used for recording the required details of the patients. During the study, data collected were demographic details such as age, sex, educational status, employment status, economic status etc. It also includes signs and symptoms of covid 19 and risk factors of covid 19.

Table1: Distribution of Age Group (Years)

S. No.	Age Group	Frequency	Percentage
1	0-17	31	6
2	18-35	215	43
3	36-53	158	32
4	54-71	76	15
5	Above 71	20	4
	Total	500	100

The above table reveals that the total population of 500 was divided into 5 groups based on their age. Out of which 6%,43%,32%,15% and 4% were coming under the age group of 0-17,18-35,36-58,59-70 and above 70 respectively, where the maximum respondents were from the age group 18-35 .

Table 2: Distribution of Gender

S. No.	Gender	Frequency	Percentage
1	Male	231	46
2	Female	269	54
	Total	500	100

The above table illustrates that the total population of 500 were divided into 2 groups based on their gender (male and female). Out of 500 populations, 46% were male and 54% were female. The maximum respondents were female which 54% was.

Table 3: Distribution of Educational Status

S. No.	Educational Status	Frequency	Percentage
1	Illiterate	95	19
2	Under Graduate	146	29
3	Graduate	259	52
	Total	500	100

The above table illustrates that the total population of 500 were divided into 3 groups based on their educational status (illiterate, under graduate and graduate). Out of 500 population, 19%, 29% and 52% were found to be illiterate, under graduate and graduate respectively.

Table 4: Distribution Of Employment Status

S. No.	Employment Status	Frequency	Percentage
1	Employed	275	55
2	Unemployed	225	45
	Total	500	100

The above table reveals that the total study population of 500 were divided into 2 groups

Table 5: Distribution of Social Status

S. No.	Social Status	Frequency	Percentage
1	Lower	59	12
2	Middle	359	72
3	Upper	82	16
	Total	500	100

(Employed, Unemployed). Here 55% were employed and 45% were unemployed.

This table demonstrates social status. Among 500 of total population 12%, 72% and 16% belong to lower, middle and upper respectively. Social status of middle category was high and was 72%.

Table 6: Distribution of Marital Status

S. No.	Marital Status	Frequency	Percentage
1	Unmarried	197	39
2	Married	271	54
3	Divorced	14	3
4	Widow	18	4
	Total	500	100

The above table reveals that the total study population of 500 was divided into 4 groups (Unmarried, Married, Divorced and Widow) based on marital status. Here the number of unmarried person, married, divorced and widowed were found to be 39%, 54%, 3% and 4% respectively. The maximum respondents were married ones which was 54%.

Table 7: Distribution of Social Habits

S. No.	Social Habits	Frequency	Percentage
1	Alcoholic	70	14
2	Smoking	27	5
3	Sedentary Lifestyle	148	30
4	Nil	255	51
	Total	500	100

This table demonstrates social habits. Out of 500 of total population, about 14% were alcoholic, 5% were smokers, 30% had sedentary lifestyles and 51% subjects do not had any social habits.

Table 8: Distribution of Lifestyle Disease

S. No.	Lifestyle Disease	Frequency	Percentage
1	Hypertension	138	22
2	Diabetes Mellitus	111	17
3	Asthma	53	8
4	Renal Disease	35	5
5	Cardiovascular Disease	42	7
6	Nil	260	41
	Total	639	100

The above table reveals that the total study population of 500 was divided into 6 groups based on lifestyle disease (Hypertension, Diabetes Mellitus, Asthma, Renal Disease, Cardiovascular Disease and Nil). Here the number of person with hypertension were 22%, 17% of them had diabetes mellitus,8% of them had asthma, 5% of them had

renal disease, 7% of them had cardiovascular disease, 41% of them had no lifestyle disease. Most of the people (41%) were not having any lifestyle diseases.

Assessment of Signs and Symptoms in Covid 19 Patients

Table 9: Distribution of Signs and Symptoms in Covid 19

S. No.	System	Signs and Symptoms	Frequency	Percentage
1	CNS	Headache	120	13
		Altered behaviour	31	3
2	Respiratory System Infection	Upper respiratory tract infection	79	8
		Acute respiratory distress syndrome	38	4
		Cough	100	11
		Nasal congestion	70	7
3	Gastrointestinal System	Nausea	55	6
		Vomiting	55	6
		Diarrhea	44	5
		Anorexia	114	12
4	Sensory System	Loss of Smell	93	10
		Loss of Taste	140	15
	TOTAL		939	100

The above table reveals that 13% study population had headache, 3% had altered behaviour, 8% had upper respiratory tract infection,4% had acute respiratory distress syndrome, 11% had cough, 7% had nasal congestion, 6% had nausea, 6% had vomiting, 5% had diarrhea, 12% had anorexia, 10% had loss of smell and 15% had loss of taste. Most of the people were found to have loss of taste which was 15%.

Table 10: Distribution of Recovery Period

S. No.	Response	Frequency	Percentage
1	1 Week	120	24
2	2 Weeks	238	48
3	More than 2 weeks	142	28
	Total	500	100

This table demonstrates recovery period of COVID -19 patients. Out of 500 population about 24% of them had recovery period of 1 week, 48% of them had recovery period of 2 weeks and 28% of them had recovery period of more than 2 weeks. The recovery period was mostly 2 weeks.

Risk Factors of Covid-19

Table 11: Distribution Based on Exposure to Public Place

S. No.	Response	Frequency	Percentage
1	Yes	320	64
2	No	180	36
	Total	500	100

The above table reveals that the total study population of 500 was divided into 2 groups based on exposure. It was found that 64% had gone to crowded places before exposure and 36% had not gone to crowded place before exposure.

Table 12: Distribution of Use of Sanitizer

S. No	Response	Frequency	Percentage
1	Yes	436	87
2	No	64	13
	Total	500	100

This table demonstrates the usage of sanitizer regularly. Out of 500 of total population, about 87% used sanitizer regularly and 13% of them have not used it regularly.

Table 13: Distribution of Usage of Mask

S. No.	Response	Frequency	Percentage
1	Yes	472	94
2	No	28	6
	Total	500	100

The above table reveals that the total study populations of 500 were divided based on usage of mask into 2 groups. Out of which 94% subjects used the mask properly and 6% of them had not used mask properly.

Table 14: Distribution of Discarding of Mask after Usage

S. No.	Response	Frequency	Percentage
1	Reuse	128	26
2	Dispose	201	40
3	Burn it	84	17
4	Throw away	76	15
5	None	11	2
	Total	500	100

This table demonstrates discarding of mask after use. Out of 500 of the total population, about 26% of them reused it, 40% of them disposed it, 17% of them burnt it and 15% of them had thrown it away

Table 15: Data on Social Distancing

S. No.	Response	Frequency	Percentage
1	Yes	416	83
2	No	84	17
	Total	500	100

The above table reveals that the total study population of 500 was divided into 2 groups based on maintenance of social distancing, out of which 83% subjects maintained social distancing of 2 meters and 17% subjects did not maintain social distancing properly.

Table 16: Data on Hygiene Measures

S. No.	Response	Frequency	Percentage
1	Yes	285	57
2	No	215	43
	Total	500	100

This table demonstrates hygiene measures. Out of 500 population, about 57% of them had touched their nose ,eyes and mouth frequently with unwashed hands, 43% of them did not touched their nose ,eyes and mouth frequently with unwashed hands.

Table 17: Data on Completion of Quarantine Period

S. No.	Response	Frequency	Percentage
1	Yes	444	89
2	No	56	11
	Total	500	100

The above table reveals that the total study population of 500 were divided based on completion of quarantine period. Out of this 89% subjects completed their quarantine period and 11% of them have not completed their quarantine period.

Table 18: Data on Contact with Family

S. No.	Response	Frequency	Percentage
1	Yes	260	52
2	No	240	48
	Total	500	100

The above table reveals that the total study population of 500 was divided into 2 groups based on contact with their family members during COVID period, out of which 52% subjects had contact with their family members during COVID period and 48% subjects did not had contact with their family members during COVID period.

Table 19: Data on Consultation with Healthcare Professionals

S. No.	Response	Frequency	Percentage
1	Yes	311	62
2	No	189	38
	Total	500	100

The above table reveals that the total populations of 500 were divided into 2 groups based on consultation with healthcare professionals, out of which 62% subjects were consulted with healthcare professionals and 38% did not consulted with healthcare professionals.

Table 20: Data on Residing in a Containment Zone

S. No.	Response	Frequency	Percentage
1	Yes	238	48
2	No	262	52
	Total	500	100

The above table reveals that the total study populations of 500 were divided into 2 groups based on residing in a locality that have been notified by Government as a COVID Containment zone. Out of which 48% subjects resided in containment zone and 52% subjects did not resides in a locality that have been notified by Government as a COVID Containment zone.

Table21: Data on Occupation Risk

S. No.	Response	Frequency	Percentage
1	Health care	80	16
2	Assisted-living	22	4
3	Aged-care facility	15	3
4	Other	383	77
	Total	500	100

The above table reveals that the total study population of 500 was divided based on occupation risk into 2 groups. Out of this 16% of them were working in health care, 4% of them were working as assisted living, 3% of them working as aged care facility, 77% of them are other workers.

Table 22: Data on Elderly People At Home

S. No.	Response	Frequency	Percentage
1	0	129	26
2	1	197	39
3	2	142	28
4	3	19	4
5	More	13	3
	Total	500	100

This table demonstrates number of elderly people at home, out of 500 population about 26% of them did not had elderly people at home, 39% of them have only one elderly person at home, 28% of them have 2 elderly people at home, 4% of them have 3 elderly people at home, 3% of them have more than 3 elderly people at home.

Table 23: Data on Pregnancy

S. No.	Response	Frequency	Percentage
1	4-12 weeks	7	29
2	12-24 weeks	12	50
3	More than 24 weeks	5	21
	Total	24	100

The above table illustrates that the total population of 500 was divided into 3 groups based on pregnancy with number of weeks (4-12 weeks, 12-24 weeks, more than 24 weeks) in which about 29% of subjects had a pregnancy period of 4-12 weeks, 50% subject had a pregnancy period of 12-24 weeks, about 21% subjects had a pregnancy period of more than 24 weeks.

Discussion

Due to lack of knowledge and carelessness, COVID-19 had spread all over the Panchayat. These conditions gives an important health risk to the whole population. This is one of the first documenting study about the prevalence of COVID-19 symptoms and risk factors in the representative sample of the exposed population in the Panchayat. In this study age group of 18-35 years was found to be more vulnerable to get exposed as well as when comparing based on the complications, the geriatrics were at higher risk. Most of the patients were suffering from ageusia (loss of taste) which was 15% and 2 weeks were the time period of recovery for most of the population in the study. Majority of the study respondents were exposed to public places which was 64%.87% of the population used sanitizer regularly which means majority of them were aware about good hand hygiene practices and 94% of the population used face mask regularly.

Conclusion

The study was conducted in 500 people where 43% of patients belonged to the age group of 18-35 and most of them were found to be females. Most of the patients were graduated and employed ones. 51% of patients had not shown any social habits (Alcoholism, smoking and sedentary lifestyle). The most commonly noticed symptom was loss of taste. Most of the respondents took about 2 weeks for recovery and the main exposure was being from crowded places. Most of people had completed their quarantine period successfully and were from high risk occupation other than health care, assisted living and aged care facilities. Pregnant ladies within 12-24 weeks were found to be 50%.

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