



**CORRELATION BETWEEN COVID-19 AND TUBERCULOSIS
PATIENT SYMPTOMS SIMILARITY IN PARUL SEVASHRAM
HOSPITAL, VADODARA**

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ABSTRACT

Background:

The burden of infectious disease is not only because of covid-19, but we have a global concern on tuberculosis as well. Both diseases have many similar features but there are striking differences too. The similarities between two diseases related to symptoms and some differences is now become matter of discussion during disease diagnostic, prevention and treatment policy.

Methods:

In this retrospective cohort study, included conformed positive covid-19 patient reported from 1 year (Jan -Dec 2020) and Tuberculosis patient reported from 1 year (Jan – Dec 2020), in Parul Sevashram hospital-Vadodara. We take 50 patients of covid-19 infection and 50 patient of TB infection. We excluded non-covid or non-TB patients.

Results:

Out of 100 patients, were having 98% symptoms of fever, cough, breathlessness, amoxia. On other side, in TB patients were having 98% amoxia, 84% weight loss and chest pain, respectively. Also, 96% patients were suffering from myalgia and 94% were suffering from fatigue, diarrhoea, nausea and vomiting, respectively. Moreover, Myalgia, fatigue, diarrhoea,

loss of test, nausea, were also clinically significant ($p < 0.05$) in suffered with covid 19 and Tuberculosis.

Conclusion:

Here our study shows the symptoms of similar between covid-19 and TB, the diagnosed with severe features and Proper identification and treatment should be our first priority in these subsets of patients, the covid-19 and TB same symptoms are fever, caught, breathlessness, weight loss and more different are fatigue diarrhoea, vomiting, loss of test, headache and myalgia.

Key words: Covid-19, tuberculosis, symptoms, diagnosis

INTRODUCTION:

The Covid 19 Infectious respiratory disease caused by a novel virus developed in Wuhan, China, in December 2019 and subsequently spread worldwide [1, 6, 9]. This rapidly spread from Wuhan to other areas [2, 10]. The coronavirus named COVID-19 has troubled the global economy and health [2, 3]. The outbreak of COVID-19 made many poor communities in different places of the world face very challenging such a large-scale event, economic costs, poverty, international health, or have measured the impacts of other epidemics and pandemics [3, 7]. That pandemics can impact financial system is through their economic costs. It has also adversely affected the morbidity and mortality [3, 11].

The study based to access of symptoms in similarity of covid-19 and TB had two infectious agents, that had unavoidable implications [4]. As far as clinical appearances are concerned, symptoms such as cough, fever, weakness, Myalgia,

Fatigue, chest pain, weight loss and haemoptysis can be seen in both conditions. Similar presentations can pose a diagnostic challenge [4].

This research is mainly focusing on the similarities and differences between covid-19 and TB because it's been noticed that during covid 19 pandemic, TB patients also having similar symptoms as covid 19. So, it may create difficulty to provide early symptoms specific treatment [1]. However, study will help clinician to provide clear view of symptoms developing among patients of Covid 19 and TB infection [7, 13].

METHODS:

Study design and participants

In this retrospective cohort study, we **included** confirmed positive covid-19 cases patients from January to December 2020 (one year) and confirmed positive TB patients reported from 2020 in Parul Sevashram hospital of Vadodara. we have taken 50 patients of COVID-19 infection

and another 50 patients of TB infection. We **excluded** non-covid or non-mycobacterium tuberculosis patients.

Data collection

We extracted data on clinical characteristics (including age, gender, medical history, and symptoms like a fever, cough, breathless, myalgia, fatigue, diarrhoea, vomiting, loss of test, loss of smell, headache, abdominal pain, chest pain, weight loss, and anoxia.) and other Co-morbidities like Diabetes, Renal Disease, Hypertension, cardiovascular diseases. From the Parul Sevashram Hospital medical record data (MRD), Vadodara. (n=100).

This research was conducted after getting approval from Parul university intuitional ethics comity for human research (PU-IECHR).

The Data Analysis was done through Microsoft excel.

Procedure:

Epidemiological, clinical, laboratory, and outcome data were collected from patients' medical records, with verification by doctors. Clinically outcomes were followed up to last past year (2020) and Laboratory confirmation of SARS-COV-2 and TB was performed in our hospital and the centre for disease control, and prevention of Parul Sevashram hospital by previously reported real-time RT-PCR and screening test (AFB test) all received Chest radiography or CT

at admission, while other respiratory viruses were excluded.

RESULTS:

Out of 100 patients, the mean age of covid-19 patients was 38.34 ± 17.18 and mean age of TB patients were 49 ± 17 out of 100 patients' male patients were more than female patients in covid-19, patients were having 98% symptoms of fever, cough, breathlessness, amoxia, and in TB patients were having 98% amoxia, 84% weight loss and chest pain. 96% patients were suffering from myalgia and 94% were suffering from fatigue, diarrhoea, nausea and vomiting. Distortion/Loss of smell, Headache, Abdominal pain, chest pain, weight loss and Amoxia were significant ($p < 0.05$) (**Figure 1**).

Figure 2 (A) show the frequency of patients having different symptoms, at Parul Sevashram hospitals of covid-19, in era of 2020, the frequency of fever, cough, breathlessness and amoxia was higher than others symptoms and lower frequency was chest pain and weight loss.

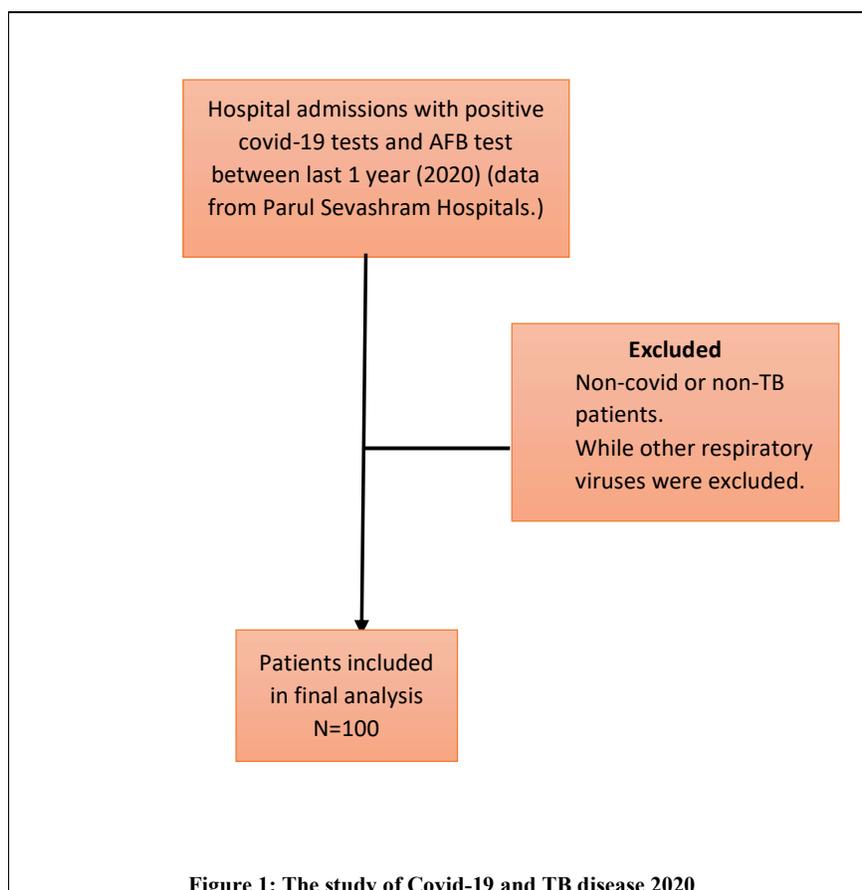
Figure 2 (B) show the frequency of patients having different symptoms, at Parul Sevashram hospitals of Tb, in era of 2020(Jan-dec), the frequency of fever, cough and breathlessness was higher than others symptoms and lower frequency was fatigue and diarrhoea.

Figure 3 shows that similarities of covid-19 and TB. Symptoms fever, cough,

breathlessness, myalgia, chest pain, weight loss and anoxia are the common symptoms see in covid-19 and TB patient.

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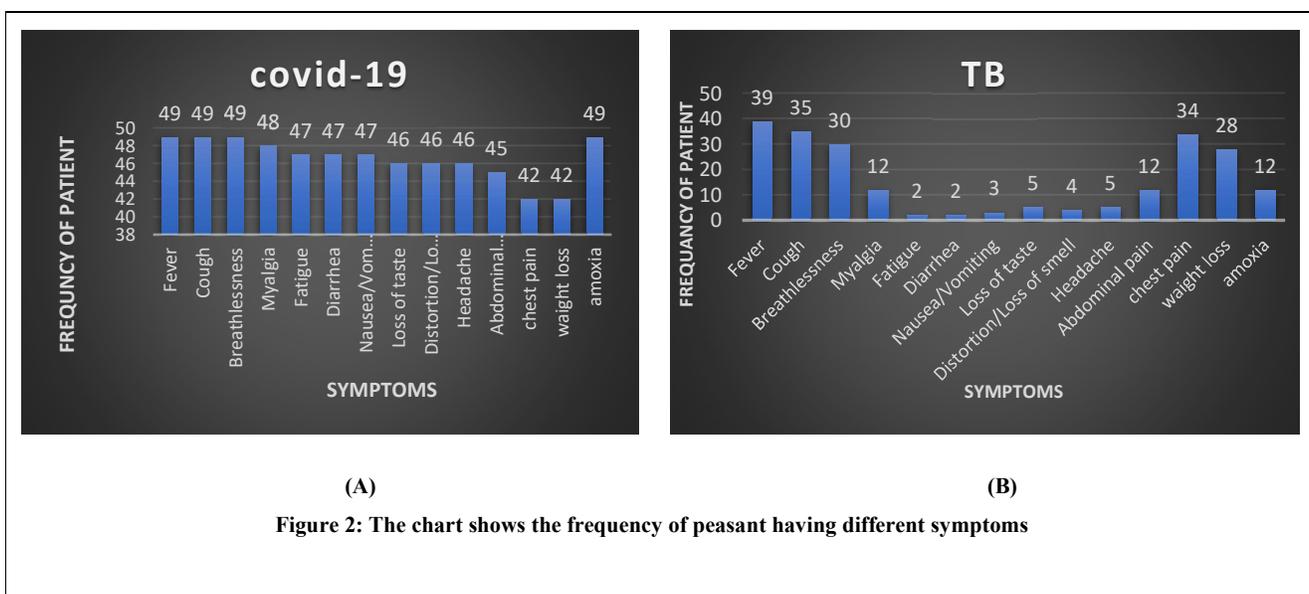


Figure 2: The chart shows the frequency of peasant having different symptoms

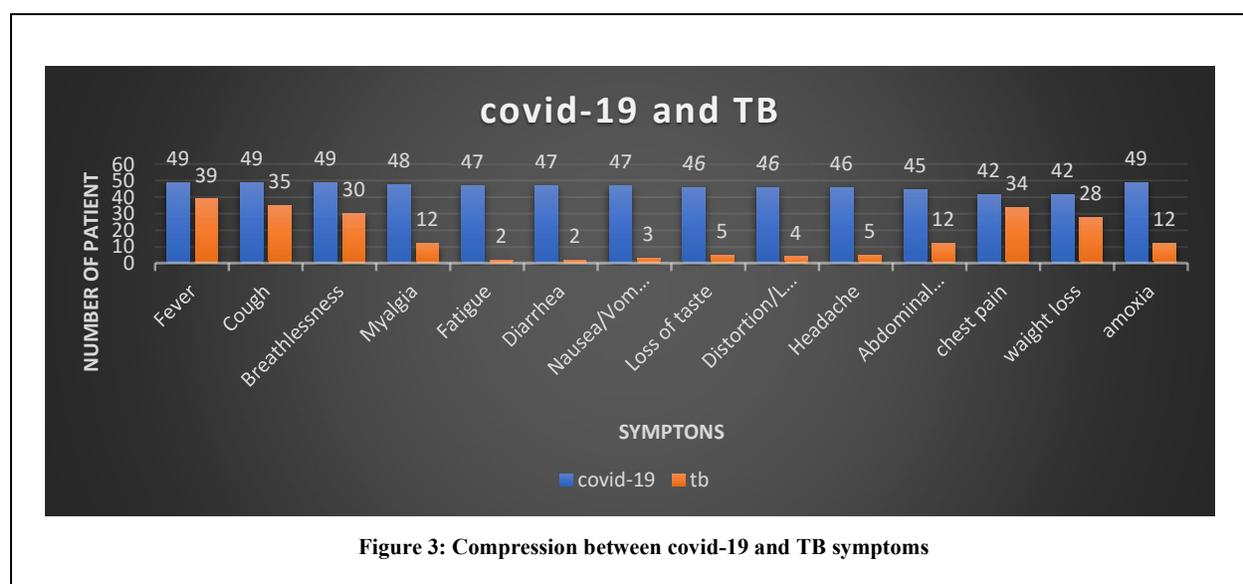


Figure 3: Compression between covid-19 and TB symptoms

DISCUSSION:

In this study shows the corelation between covid-19 and TB symptoms similarity [4, 8, 18]. this study is to identify the differences and similarities between COVID 19 and TB patient’s symptoms [1, 5, 17].

In other study mention symptoms are reported fatigue, and other corporal and

neuropsychiatric symptoms such as musculoskeletal pain, headaches, sleep disturbances, concentration problems and mood problems. But, in this study, mention symptoms are fever cough, breathlessness, myalgia, fatigue, diarrhoea, Nausea/vomiting, loss of taste/smell, headache, abdominal pain, chest pain,

weight loss and anosmia was seen in both Covid-19 and TB patient [12, 19].

Another study suggested that number of 89 patients have 55(35.4%) had anosmia, 25(16.1%) had ageusia, 42(27%) had sore throat, 68 (43.8) had cough, 20(12.9%) had nasal congestion, 10(6%) had postnasal discharge, 4(2%) had otalgia, 15(9%) had runny nose, and 1(0.6%) had sudden hearing loss problem. Yet, in our result was the covid-19 number of 50 patients were having 48(98%) symptoms of fever, cough, breathless, anosmia and in TB patients were having 48(98%) anosmia 42(84%) weight weight loss and chest pain. 48(96%) patients were suffering from myalgia and 47(94%) were suffering from fatigue, diarrhoea, nausea and vomiting. Myalgia, fatigue, diarrhoea, loss of test, nausea was significant ($p < 0.05$) [16].

In other research's many of the symptoms are often not declared [20]. However, our study was mentioning major symptoms related to covid-19 and TB. the other study the initiative for SARS-COV-2 screening started from fever clinics, while fever, caught and shortness of breath the most highlighted symptoms which increases the risk of omitting those patients with other symptoms and normal body temperature. In our study focus with all symptoms which show in patients [12].

Another study suggested that largest male population in areas that was include

potential contact to the disease, also our study the male is more affected with infection in covid-19. [14] according to Nitesh Gupta *et al.* the common symptoms was fever (54.5%) and tuberculosis may not be a key determinant of mortality, majority of patient requiring only symptomatic care, a very high incidence of mortality was observed. However, in the current study suggested that, the major common symptoms between covid-19 and TB are fever and cough [14].

Carfi *et al* suggest that a significant proportion of covid-19 patient continue to persistent symptoms result in significant disable, in our study also finding some significant value like Myalgia, fatigue, diarrhoea, loss of test, and nausea [12, 15].

B. C. poyraz *et al.* reported the common symptoms was suggested, with fatigue, muscle aches, loss of smell/test, headache, difficult in concentration, daytime sleeping, and numbness in our study common symptoms are fever, cough and breathlessness [12].

CONCLUSION:

The covid-19 widespread had a negative and disrupted the lives of people in a number of countries. Since both viral respiratory infections and TB impair the host's immune response, it is reasonable to assume that their lethal mixture will have far more severe effect than they would have had separately. A stronger management

strategy is required proper diagnosed, identification and treatment are our first priority.

Here our study shows the symptoms of similar between covid-19 and TB, the symptoms are similar and different too, the diagnosed with severe features, prolonged clinical course and a typical radiographic finding. Proper identification and treatment should be our first priority in these subsets of patients, the covid-19 and TB same symptoms are fever, cough, breathlessness, weight loss and more different are fatigue diarrhoea, vomiting, loss of test, headache and myalgia.

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