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SUFFERINGS OF COVID 19 POSITIVE PATIENTS REGARDING MAJOR SYMPTOMS: A PROSPECTIVE OBSERVATIONAL STUDY

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ARTICLE INFO | **ABSTRACT** | **ORIGINAL RESEARCH ARTICLE**

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Background: First COVID-19 cases were detected in Bangladesh in Dhaka city on the 8th March of 2020. Till then the number of Covid-19 patients are being increased. It is a newer version of a viral disease and it has a ferocious nature of affecting a large number of people within a couple of days. So, to save billions of people we have to acquire clear ideas about the symptoms, sufferings, comorbidities, and treatment options of this disease. In Bangladesh, we have very limited research-oriented data regarding those issues of Covid-19. **Aim of the study:** The aim of this study was to assess the sufferings of Covid 19 positive patients regarding major symptoms. Methods: This was a prospective observational study which was conducted in the Department of Medicine, Sher-e-Bangla Medical College Hospital (SBMCH), Barishal, Bangladesh during the period from July 2020 to December 2020. In total 75 RT-PCR (Reverse Transcription Polymerase Chain Reaction) confirmed Covid19 patients who attended the mentioned hospital was selected as the study people. The ethical committee of the mentioned hospital approved this study. Properly written consent was

taken from all the participants before starting data collection. A pre-designed questionnaire was used in patent data collection. Data were analyzed by MS Office and SPSS version 24.0. **Result:** In analyzing the sufferings of patients because of fever, we observed, the peak numbers of patients with low, intermediate, and high grade fever were found on the first day of this study which were 27, 9, and 3 respectively. From low, intermediate and high grade fever, those patients got relieved on the day 13, 4 and 3 respectively. On the other hand, the peaknumbers of patients with low, intermediate and high grade cough were found on the day 11, 1 and 2 of this study which was 33, 12 and 6 respectively. From low, intermediate and high grade cough, those patients got relieved on the day 16, 6 and 4 respectively. Besides this, the peak numbers of patients with low, intermediate and high grade breathlessness werefound on the day 4, 1 and 2 of this study which was 18, 15 and 6 respectively. From low, intermediate and high grade breathlessness, those patients got relieved on the day 15, 6 and 4 respectively. The peak numbers of patients with sore throat were found on day 3 which was 18 and from this symptom those patients got relieved on day 13. On thefirst day, the SpO2 percentage was found 96.12±2.64 which was increased up to 97.47±1.18 on the last day of this study. **Conclusion:** In this study fever, cough, breathlessness, and sore throat were found as the major symptoms among the Covid-19 positive patients. But we observed fever could be absent in a significant part of patients at initial presentation. Among all the participants, lymphopenia and bilateral alterations at chest CT were very common between patients with COVID-19 and could be helpful in identifying suspected cases.

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I INTRODUCTION

First COVID-19 cases were detected in Bangladesh in Dhaka city on the 8th March of 2020. Till then the number of Covid-19patients is being increased. It is a newer version of a viral disease and it has a ferocious nature of affecting a large number of people within a couple of days. So, to save billions of people we have to acquire clear ideas about the symptoms, sufferings, comorbidities, and treatment options of this disease. In Bangladesh, we have very limited research-oriented data regarding those issues of Covid-19. Several papers have been published regarding arthroscopically assisted. The novel coronavirus disease (COVID-19) is by far the most concerning the outbreak of atypical pneumonia since the far less detrimental 2003 outbreak of severe acute respiratory syndrome (SARS).[1] The COVID-19 pandemic has been declared an international public health emergency by the World Health Organization (WHO).[2] As of July 1st, 2020, the COVID-19 pandemic has infected over ten million people across the world, causing more than 5,00,000 deaths.[3] Experts are still uncertain of the trajectory of the COVID-19 pandemic, the projected number of cases and deaths, or to what extent quarantine measures will disrupt daily life.[4] The unpredictable nature of this situation and uncertainty regarding COVID-19 can often trigger psychological distress and mental illness, including depression, anxiety, and traumatic stress.[5] Days by day the Covid situation in Bangladesh is worsening. COVID-19 has reached all 64 administrative districts in

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Bangladesh by July 1st, 2020, causing over 145,000 cases and 1,874 deaths thus far.[5] High density of population, poor hygiene practices, and poor economic conditions make the majority of the Bangladeshi population particularly vulnerable to this virus (Covid 19). Severe acute respiratory illness with fever and respiratory symptoms, such as cough and shortness of breath, comprise the main clinical presentations.[6] But unusual manifestations, such as patients without respiratory symptoms or only very mild symptoms are rising worldwide.[7] Understanding regional features are always important. A number of studies elaborating local epidemiological and clinical features have been published.[8] The major objective of this study was to assess the sufferings of Covid 19 positive patients regarding major symptoms.

II OBJECTIVES

General Objective:

- To assess the sufferings of Covid-19 positive patients regarding major symptoms.

Specific Objective:

- To collect information regarding the demographic status of participants.
- To collect information sufferings of Covid-19 patients regarding fever, breathlessness and cough.

III METHODOLOGY & MATERIALS

This was a prospective observational study which was conducted in the Department of Medicine Sher-e-Bangla Medical College Hospital (SBMCH), Barishal, Bangladesh during the period from July 2020 to December 2020. In total 75 RT-PCR (Real-Time Reverse Transcription Polymerase Chain Reaction) confirmed COVID-19 patients who attendedthe mentioned hospital were selected as thestudy people. The ethical committee of the mentioned hospital approved this study. Properly written consent was taken from all the participants before starting data collection. In patent data collection, a pre-designed questionnaire was used. According to the inclusion criteria of this study, only RT-PCR confirmed Covid-19 patients from several age groups of both genders were included as study people. On the other hand, according to the exclusion criteria of this study, severely ill patients, pregnant women, patients of ICU or ventilation were excluded. During data collection and taking interview of participants as well as medical staffs appropriate social distancing were maintained. All Data were analyzed by MS Office and SPSS version 24.0.

IV RESULT

In this study, the mean (±SD) age ofthe participants was 45.47±16.46 years (Rangewas 22-78). The highest number of participants was found from > 50 years' age group which was 34.67%. the rest of 2 third portion of the participants were from the 21-50years' range. Among the total of 75 participants, 86.67% were male whereas the rest 13.33% were female. So male participants were dominating in number and the male- female ratio was 6.5:1. In analyzing thesufferings of patients because of fever, we observed, the peak numbers of patients with low, intermediate, and high grade fever were foundon the first day of this study which were 27, 9, and 3 respectively. From low, intermediate and high grade fever, those patients got relieved on the day 13, 4 and 3 respectively. On the other hand, the peak numbers of patients with low, intermediate and high grade cough were found on the day 11, 1 and 2 of this study which was 33, 12 and 6 respectively. From low, intermediate and high grade cough, those patients got relieved on the day 16, 6 and 4 respectively. Besides this, the peak numbers of patients with mild, moderate and severe breathlessness were found on the day 4, 1 and 2 of this study whichwas 18, 15 and 6 respectively. From low, intermediate and high grade breathlessness, thosepatients got relieved on the day 15, 6 and 4 respectively. The peak numbers of patients with sore throat were found on day 3 which was 18 and from this symptom those patients

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got relieved on day 13. On the first day, the SpO2 percentage among the participants was found 96.12±2.64 which was increased up to 97.47±1.18 on the last day of this study.

Table 1: Demographic status of participants (N=75)

Characteristics	n	%
Age in year		
21-30	16	21.33
31-40	16	21.33
41-50	17	22.67
>50	26	34.67
Mean± SD		45.47±16.46
Range (min-max)		22-78
Gender		
Male	65	86.67
Female	10	13.33

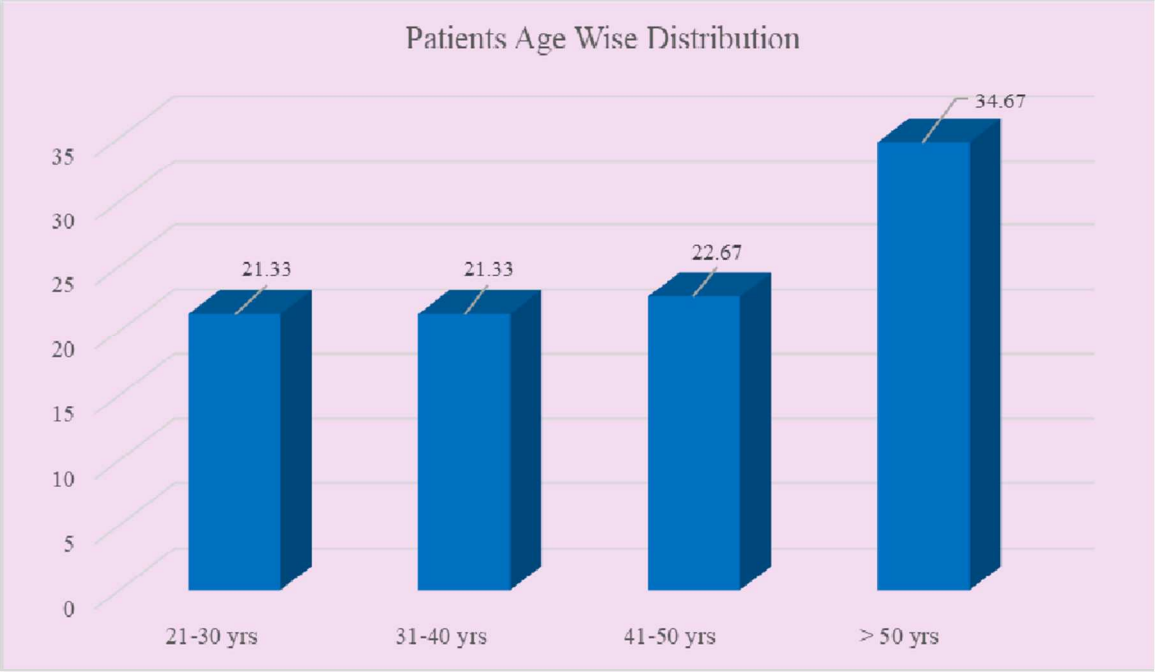

Figure I: Patients Age Wise Distribution (N=75)

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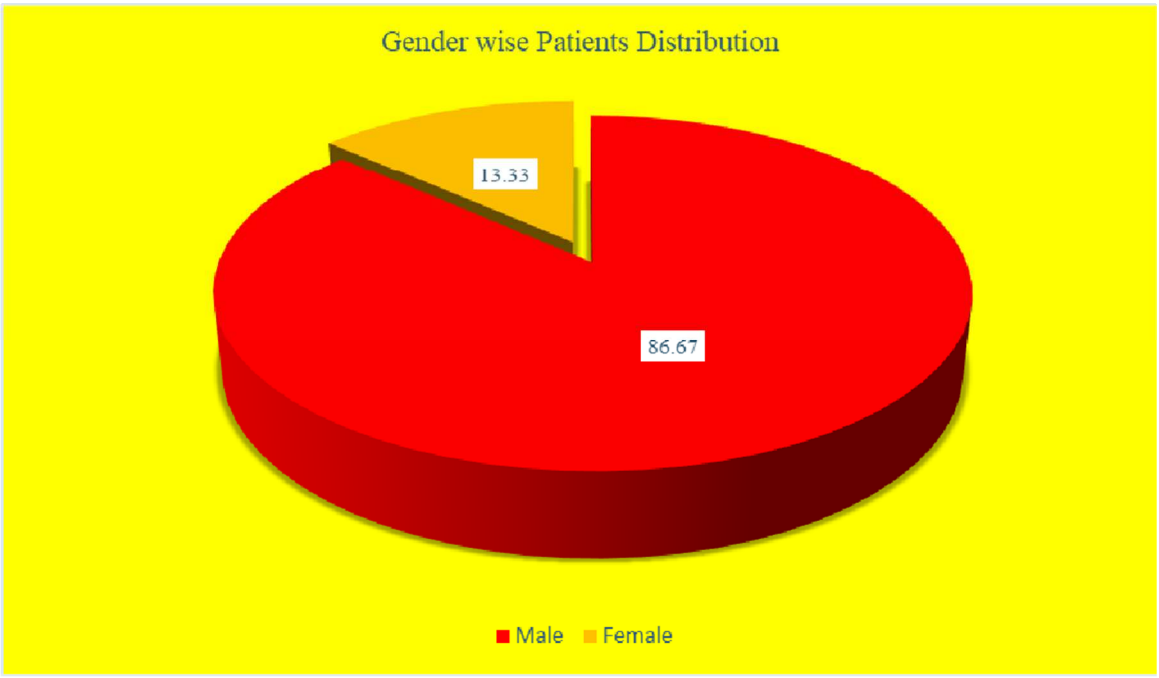

Figure II: Patients Age Wise Distribution (N=75)

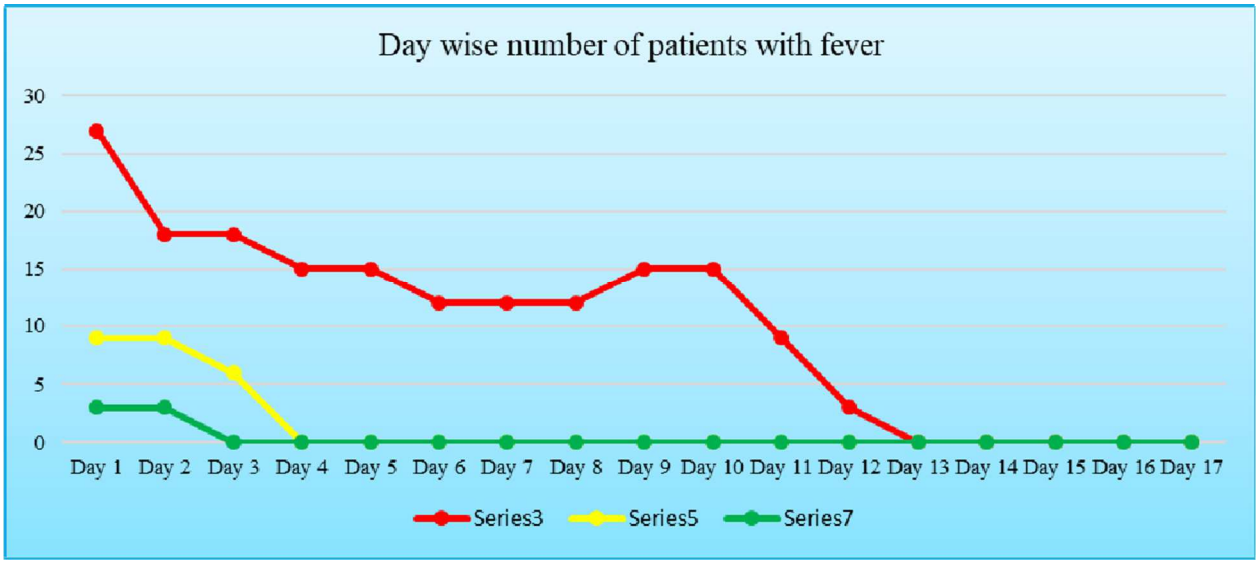

Figure III: Sufferings of patients regarding fever (N=75)

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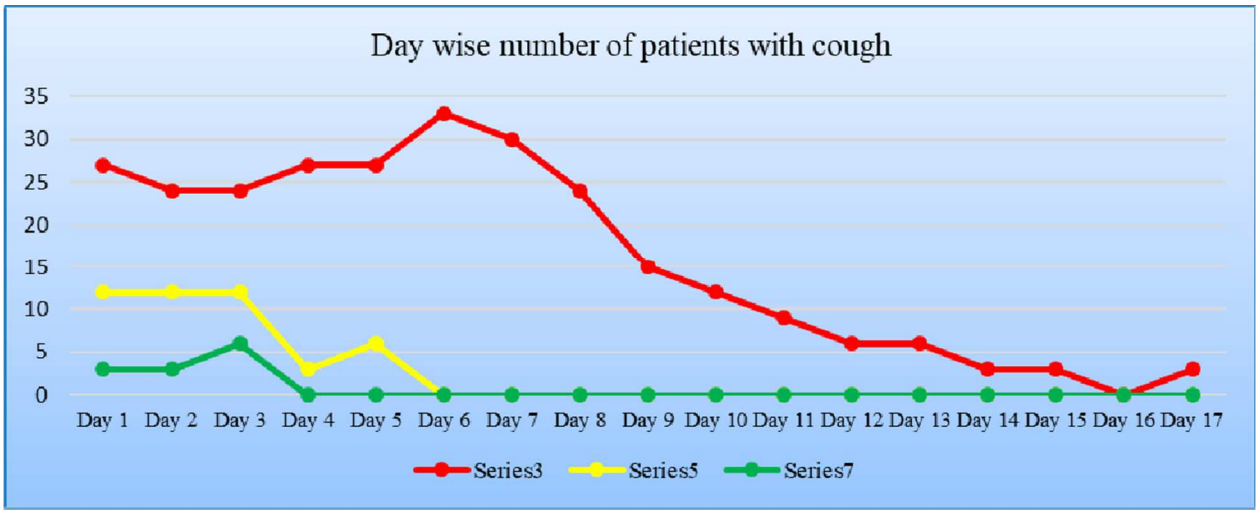

Figure IV: Sufferings of patients regarding cough (N=75)

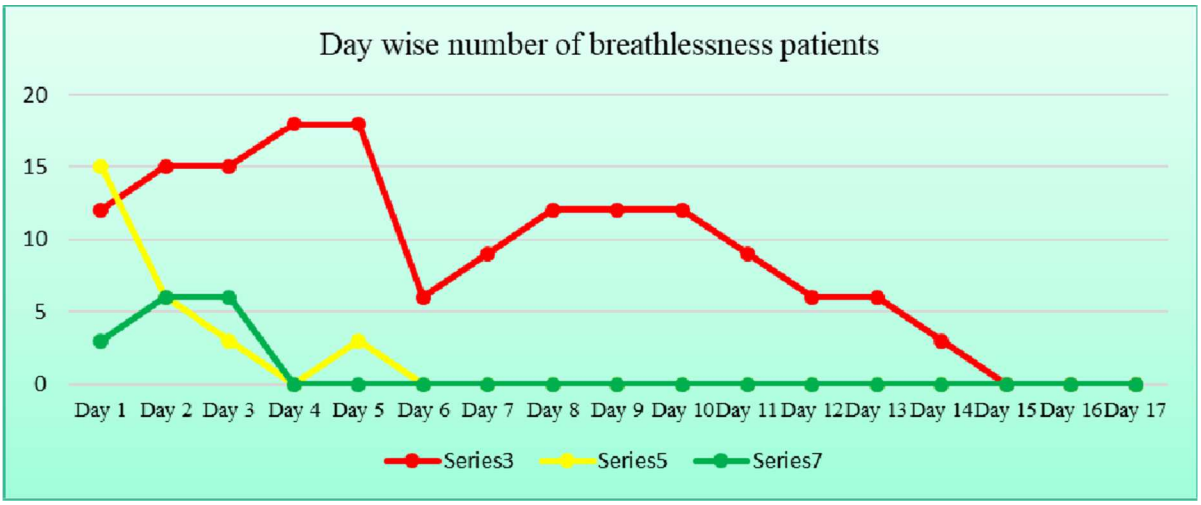

Figure V: Sufferings of patients regarding breathlessness (N=75)

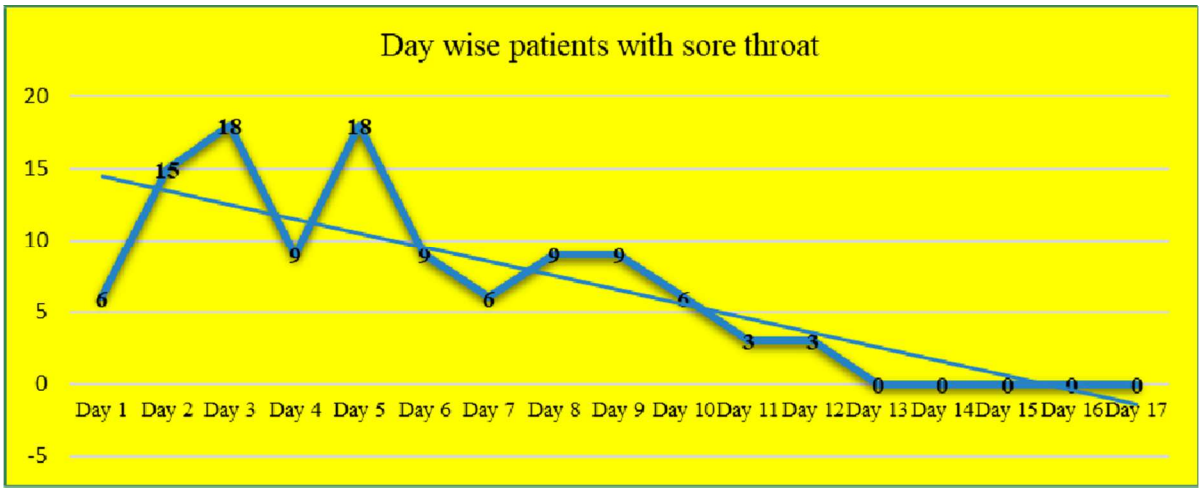

Figure VI: Sufferings of patients regarding breathlessness (N=75)

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Table 2: Development of SpO2 levels in percentage of participants (N=75)

Day	Mean± SD	Range (Min, Max)
Day 1	96.12±2.64	92,100
Day 17	97.47±1.18	96,99

V DISCUSSION

The aim of this study was to assess the sufferings of Covid 19 positive patients regarding major symptoms. In analyzing the sufferings of patients because of fever, we observed, the peak numbers of patients with low, intermediate, and high grade fever were foundon the first day of this study which were 9, 3, and 1 respectively. From low, intermediate and high grade fever, those patients got relieved on the day 13, 4 and 3 respectively. Fever is one of the most preserved evolutionary responses over 600 million years to infections in invertebrates, amphibians, reptiles, fish, and mammals.[9] It is a complex custom-line mediated physiological response that stimulates both the innate and adaptive arms of immunity involving adrenergic stimulation pathways.[10] Guan et al. reported fever in 42.8% at the time of admission and 88.7% of the COVID-19 patients at the time of hospitalization.[11]A recent review and meta-analysis[12] confirmed that fever and cough were the most frequent symptoms but reportedthat sore throat was rare. In our study, the peak numbers of patients with low, intermediate, and high grade cough were found on days 11, 1, and 2 of this study which were 11, 4, and 2 respectively. From low, intermediate and high grade cough, those patients got relieved on the day 16, 6 and 4 respectively. The peak numbers of patients with sore throat were found on day 3 which was 6 and from this symptom those patients got relieved on day 13. According to the large series from the Chinese Center for Disease Control and Prevention, 14% of COVID-19 cases were severe (ie, dyspnea, respiratory frequency 30/min, blood oxygen saturation ≤ 93%, partial pressure of arterial oxygen to fraction of inspired oxygen ratio50% within 24-48 hours), and 5% were critical(ie, respiratory failure, septic shock, and/or multiple organ dysfunction or failure).[13] In our study, the peak numbers of patients with low, intermediate and high grade breathlessness were found on the day 4, 1 and 2 of this study whichwas 6, 5 and 2 respectively. From low, intermediate and high grade breathlessness, thosepatients got relieved on the day 15, 6 and 4 respectively. On the first day of this current study, the SpO2 percentage among the participants was found 96.62±2.33 which was increased up to 97.5±2.12 on the last day of this study.

VI LIMITATIONS OF THE STUDY

This was a single-centered study with a limited sample size. So, the findings of this study may not reflect the exact scenario of the whole country.

VII CONCLUSION AND RECOMMENDATIONS

In this study fever, cough, breathlessness, and sore throat were found as the major symptoms among the Covid-19 positive patients. But we observed fever could be absent in a significant part of patients at initial presentation. Among all the participants, lymphopenia and bilateral alterations at chest CT were very common between patients with COVID-19 and could be helpful in identifying suspected cases. For getting more reliable information we would like to recommend conducting more studies in several places with larger sample sizes.

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