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LONG-COVID-19 SYMPTOMS AFTER INFECTION IN COVID LONG-HAULERS



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Long-COVID-19 Symptoms after Infection in COVID Long-Haulers

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Abstract

The negative molecular swab does not mean that the body and mind are healed: even months after Sars-Cov-2 infection, patients may continue to have symptoms. The symptoms mainly present at 6-12 months in patients recovered from Covid-19 are: asthenia, breathlessness, difficulty in breathing deeply, myalgia but also psychological disorders and difficulty in concentrating such as “brain fog”.

The study was conducted from June 2021 to July 2021 at Health Prevention Department in Benevento (Campania Region, South Italy). 133 patients accepted the questionnaire in the form of telephone interview.

The purpose of this study is precisely to highlight how, although a year after infection, a number of patients still show post-COVID symptoms. In particular 77 of 133 positive patients are resulted Long-Haulers (58%).

Introduction

On December 31, 2019, Chinese health authorities reported that an outbreak of atypical pneumonia of unknown aetiology had developed in the city of Wuhan (Hubei province, central-eastern China). Many of the initial cases reported attendance at the Wuhan wholesale fish market, where wild animals of disparate species are also for sale, used for food purposes. On January 9, 2020, the Chinese Center for Disease Control announced that it had identified the causative agent: a new coronavirus, first provisionally named 2019-nCoV and officially named SARS-CoV-2 by the International Committee on Taxonomy of Viruses on 11 February 2020, which was quickly sequenced and made available to the scientific community and subsequently confirmed the possibility human-to-human transmission of the virus.

Coronaviruses are a group of related RNA viruses common in many animal species (such as camels and bats) but in some cases, rarely, they can change and infect humans and then spread to the population, mainly causing upper respiratory tract infections and of the gastrointestinal tract. The severity of these conditions is highly variable, since coronaviruses are responsible for both a large number of common cold syndromes and severe respiratory syndromes such as SARS (Severe Acute Respiratory Syndrome) and MERS (Middle East Respiratory Syndrome).

The picture of SARS-CoV-2 infection is that of acute viral pneumonia. The onset symptoms of SARS-CoV-2 infection are rather non-specific and occur in a syndromic form in 90% of cases:

hyperpyrexia even high, above 39 °C;
generally dry cough, more rarely productive;
malaise and asthenia;
dyspnoea;
pharyngodynia;
headache;
myalgia;
anosmia and/or dysgeusia.

Unlike other human coronaviruses, gastrointestinal symptoms such as diarrhea, nausea and vomiting are rare.

Covid-19 pandemic has led to a growing population of individuals recovering from acute SARS-CoV-2 infection. However, a number of these patients may experience a wide range of symptoms after recovery from acute illness, which is referred to by several terms including "Long-COVID", "post-COVID conditions" and post-acute sequelae of SARS-CoV-2 Infection (PASC).

Although there are no widely accepted definitions of the stages of recovery from Covid-19, the Centers for Disease Control and Prevention (CDC) have proposed the following categories:

Acute Covid-19: symptoms of Covid-19, up to four weeks after the onset of the disease

Post-Covid-19 conditions: Wide range of symptoms (physical and mental) that develop during or after Covid-19, continue for ≥ 4 weeks and are not explained by an alternative diagnosis.

These phases reflect symptomatic recovery and are not related to active viral infection and infectivity.

Materials and Methods

This study was conducted on 133 patients, 60 females (45,1%) and 73 males (54,9%) with Sars-Cov-2 infection during the first wave of Covid-19 pandemic in Benevento, a city of Campania Region (South Italy). We proposed a questionnaire in the form of telephone interview to a group of 192 Covid-19 positive patients treated by Health Prevention Department. Only 133 patients accepted the interview. Interview was conducted from June 2021 to July 2021 after 11-12 months of their recovery from the infection. The age of 133 patients ranged from 3 years to 91 years (Table 1); under-18 patients answered with

parental authorization. The patients, non-hospitalized, were classified into three groups: asymptomatic; paucisymptomatic (patients with anosmia and/or dysgeusia and/or asthenia and/or low-grade fever and/or headache and/or myalgia); mild-moderate symptomatic (TB > 37,5 C° and/or cough and/or dyspnea).

Age	Male	Female	Total
0-9	1	0	1
10 -19	6	6	12
20 -29	12	9	21
30 -39	10	4	14
40 -49	10	15	25
50 -59	17	17	34
60 -69	11	5	16
70 -79	1	1	2
80 -89	4	3	7
90 +	1	0	1
Total	73	60	133



Table 1. Characteristic of Covid-19 positive patients.

133 patients positives from March 2020 to June 2020, were classified: 97 (73%) were asymptomatic, 23 (17%) pauci-symptomatic, 13 (10%) with symptoms mild-moderate.

Patients answered questions about their symptoms, physical and mental, after their Covid-19 infection. They reported their clinical conditions after their recovery.

Results

Patients with Long Covid-19 symptoms are appointed as Long-Haulers. They have exhibited symptoms even after their recovery (Table 2). In particular 77 of 133 positive patients are resulted Long-Haulers (58%). In these patients the symptoms reported were: dyspnea (12%),

shortness of breath (21%), chest pain or tightness (17%), breathlessness (22%) tachycardia (19%), hypertension (1%), anosmia and/or dysgeusia (23%), skin rash (2%), asthenia (57%), headache (6%), dizziness (5%), osteoarticular pains (46%), anxiety (27%), depression (10%), poor memory and concentration (25%), brain fog (28%), insomnia (7%).

Pulmonary and cardiovascular manifestation were more frequently in patients with diabetes, bpco, hypertension. Psychological symptoms, such as anxiety and depression, were more frequently in adolescent patients and the same in female gender. Cognitive symptoms were more frequently in asymptomatic patient.

Physical Symptoms	%
dyspnea	12%
shortness of breath	21%
chest pain or tightness	17%
breathlessness	22%
tachycardia	19%
hypertension	1%
anosmia and/or dysgeusia	23%
skin rash	2%
asthenia	57%
headache	6%
dizziness	5%
osteoarticular pains	46%
Psychological Symptoms	
anxiety	27%
depression	10%
Cognitive Symptoms	
poor memory and concentration	25%
brain fog	28%
insomnia	7%



Table 2. Long-Covid19 symptoms of positive patients.

Discussion

The negative molecular swab does not mean that the body and mind are healed: even months after Sars-Cov-2 infection, patients may continue to have symptoms. The symptoms mainly present at 6-12 months in patients recovered from Covid-19 are: asthenia, breathlessness,

difficulty in breathing deeply, myalgia but also psychological disorders and difficulty in concentrating such as “brain fog”.

Conclusion

SARS-CoV-2, the virus that causes Covid-19, was identified in December 2019. There is still a lot to learn about it, but our understanding of the virus and Covid-19 is evolving by the day. Researchers will learn more about how and why the coronavirus affects different people in such a variety of ways, and why some people experience no symptoms at all while others have life-threatening organ damage or lasting disability. New insights will provide avenues for therapies and hope for people living with long-term Covid-19 effects.

