

COVID-19 pandemic and days of absence from work in workers with flu-like symptoms in the City of Rome, Italy

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Abstract

COVID-19 has dramatically affected working forces. We aim to report our occupational medicine service's experience in managing suspected COVID-19 cases during the pandemic through a retrospective observational study. We compared the number of days employees were absent from work due to flu-like symptoms from March 2020 to February 2021 to the same period the previous year (2019-2020). Two hundred thirty-four patients (+47.2% compared to the previous year) who tested negative for SARS-CoV-2 reported flu-like symptoms; the number of days of absence from work was 2812 (+190.2% compared to the previous year). On average, employees with flu-like symptoms lost 12.07 working days compared to 6.12 in the previous year ($p<0.0001$). In conclusion, in our sample COVID-19 has increased the number of working day loss. However, our approach proved to be important, especially during the first months of the pandemic, to limit SARS-CoV-2 spread in workplaces. *Clin Ter 2022; 173 (1):64-66.*
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Key words: SARS-CoV-2, COVID-19, Occupational medicine, Flu symptoms

Introduction

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has drastically affected healthcare systems around the world during the last 18 months since the first outbreak in the city of Wuhan, Hubei Province of China (1) (1). In addition to the effects on population health and healthcare management, Coronavirus Disease 19 (COVID-19) has also dramatically affected working forces for employees affected – or with suspect infection – resulting in a large loss of working hours, especially for tasks not suitable for remote working (2, 3).

Undoubtedly, one of the most difficult tasks faced by occupational and legal doctors during the pandemic was the differential diagnosis between SARS-CoV-2 positive patients and cases of unrelated “common cold” or “flu-like syndromes”. Considering the clinical definition provided

by the 2020-21 InfluNet protocol, a flu-like syndrome is characterized by a) the sudden and rapid onset of at least one of the following general symptoms: high or low fever, malaise/fatigue, headache, muscle aches; and b) at least one of the following respiratory symptoms: cough, sore throat, shortness of breath (4).

Most of these non-specific symptoms, which are observed in seasonal influences by influenza viruses A, B, or C, are also in common with SARS-CoV-2 infection; differential diagnosis can be made using a Polymerase Chain Reaction (PCR) nasopharyngeal swab (5, 6).

From the beginning of the pandemic, it has become evident that one could not draw a distinction between COVID-19 and other conditions based solely on clinical symptoms and physical examination (7, 8). Indeed, several COVID-19 positive cases displayed common cold-like symptoms with severe headaches. In certain cases, the epidemiological link was unequivocal and helped formulate a diagnosis; in fact, anyone who presented with acute respiratory infection symptoms and has been in close contact with a probable or confirmed case of COVID-19 in the days preceding the onset of such symptoms had a high probability of having developed the same disease. In addition, some symptoms such as hyposmia or anosmia, or severe respiratory distress, could indicate a probable SARS-CoV-2 infection (9, 10).

From the point of view of occupational medicine, COVID-19 disrupted the regular symptom evaluation, as it was necessary to proceed with an accurate anamnesis to investigate whether the employee had been in places (working environment and others) or regions with a high risk of COVID-19 contagion in the 14 days preceding the development of symptoms (8).

We conducted a retrospective observational study on the number of days of absence from work due to flu-like symptoms authorized by occupational medicine doctors in employees during COVID-19 pandemic and compared this to the same period the previous year (2019-2020), expecting an increase in total number of days of absence during the pandemic due to a more cautious approach in the evaluation of the patients. The aim of the study was to investigate whether COVID-19 pandemic led to an increase of working day

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loss in our sample due to the clinical presentation similarities between flu-like syndromes and COVID-19 symptoms.

Methods

To better understand the impact of COVID-19 on lost working days for flu-like symptoms, we retrospectively evaluated the number of days of absence from work due to flu-like symptoms (fever, fatigue, headache, muscle aches, cough, sore throat, shortness of breath) in administrative employees of our institution. The study was performed in the occupational and legal medicine service of a large university hospital in the city of Rome, Italy.

All clinical records of administrative employees of our institution referring to our occupational medicine service were reviewed. Records with days of absence from work authorized by occupational medicine doctors due to one or more of the following symptoms were included in the study: fever, fatigue, headache, muscle aches, cough, sore throat, shortness of breath. Medical records of workers who did not meet the inclusion criteria were excluded.

For each included record, the total number of authorized days of absence from work was collected and stored in an Excel file (Microsoft Inc., USA). Then, data from the period March 2020–February 2021 were compared to data of the same period of the previous year (March 2019–February 2020).

Statistical analysis

Unpaired t test was used to compare the total number of days of absence from work authorized in the period March 2020–February 2021 with those authorized in the period March 2019–February 2020. A p value less than 0.05 was considered the cutoff for statistical significance.

Prism Software version 8.3.1(GraphPad Software LLC) was used to perform statistical analysis and prepare figures.

Results

The number of patients reporting flu-like symptoms that resulted negative for SARS-CoV-2 at PCR nasopharyngeal swab was 234 compared to 159 during the previous year (47.2% increase), and the number of days of absence from work was 2812 compared to 969 during the previous year (190.2% increase).

On average, employees with flu-like symptoms lost 12.07 working days in the period March 2020–February 2021 compared to 6.12 in the previous year (+92.2%). The difference was statistically significant ($p < 0.0001$) (Fig. 1).

Discussion

Our study showed a significant increase in the total number of days of absence from work authorized by occupational medicine doctors for flu-like symptoms during the pandemic compared to the same period of the previous year. In fact, to

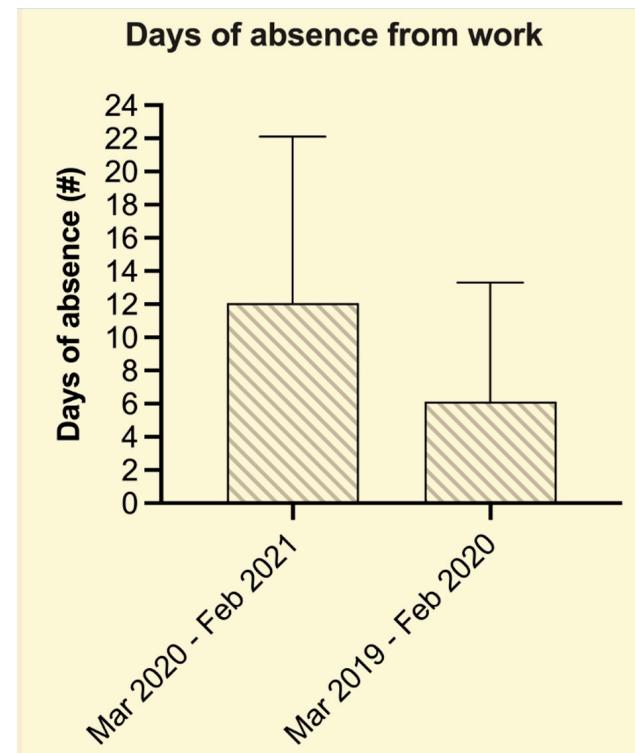


Fig. 1. Days of absence for flu-like symptoms in patients in our sample. Figure shows the comparison between the period March 2020–February 2021 with the same period of the previous year (March 2019–February 2020).

avoid the return to work of potentially COVID-19 positive subjects leading to possible dangerous outbreaks in working places, further virus spread and unpleasant medical-legal issues, flu-like syndromes in employees were addressed with the maximum attention, diligence, and caution (11).

Generally, to monitor the progression of the disease, the prognosis of affected employees was usually prolonged (fiduciary home isolation until diagnostic certainty was recommended) and rapid antigen tests or, in case of suspicious symptoms (i.e., bilateral interstitial pneumonia, anosmia or ageusia), molecular tests, were recommended to exclude SARS-CoV-2 infections. Some studies have emphasized the usefulness of chest computed tomography in terms of differential diagnosis between flu-like syndrome and COVID-19 (12); however, being expensive and invasive especially in a period when hospitals were under pressure, these exams were reserved to cases with serious respiratory involvement (13).

This careful behavior proved to be very important for public health safety, especially in the first months of the pandemic (March–May 2020), when no reliable rapid screening tests were available. Later, more diagnostic tests have been introduced, with increased sensibility and sensitivity and faster processing times such as Real Time PCR and antigen rapid nasopharyngeal swabs (14). In the recent months, the release of SARS-CoV-2 vaccines and the increasing immunization of the population have further contributed to limit the spread of SARS-CoV-2.

Limitations of the study

This study has several limitations. They include the small size of the sample, the absence of demographic data and the absence of individual clinical information, thus preventing a more detailed analysis and comparison of data based also on clinical characteristics of patients.

In conclusion, we documented in our sample an increase of workdays lost due to flu-like symptoms during the pandemic following a more cautious behavior of general and occupational medicine doctors. Our approach proved to be important, especially during the first months of the pandemic, to limit SARS-CoV-2 spread in workplaces. Certainly, the massive availability of diagnostic tests, the elevate number of immunized population and the increasing knowledge of COVID-19 symptoms will help limiting this phenomenon.

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Conflict of interest

The authors declare that they have no competing interests.

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