High prevalence of silent hypoxia among patients with COVID-19 warrants screening for oxyhemoglobin desaturation among patients with fever, cough or dyspnea

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Background and Aims: The pandemic of novel coronavirus disease 2019 (COVID-19) has caused major mortality worldwide. Reports for excessive sudden death among patients with COVID-19 resulted in arousing public panic for silent hypoxia. The present study aimed to investigate the clinical presentations of COVID-19 to identify patients at risk of developing severe hypoxemia.

Methods: During an outbreak of domestic transmission of COVID-19 in Taipei in 2021, patients who were hospitalized with confirmed COVID-19 to Wan Fang Hospital were stratified into three groups by the required respiratory support as (I) room air, (II) O2 cannula/mask, and (III) mechanical ventilation. The demographic characteristics and clinical presentations of enrolled patients were analyzed for risk factors of hypoxia.

Results: The mean age was 64.2±15.7 years with a male-female ratio of 1.24 and the mean cycling threshold value of 23.6±5.6. The most common reported symptoms were fever (61.5%), cough (50.8%), and dyspnea (44.5%). Among the 130 patients enrolled, 43, 58, and 29 were categorized in to groups I, II, and III, respectively. Dyspnea was perceived and reported in 23.3%, 50.0%, and 65.5% (p=0.003, Table 1) among patients in groups I, II, and III, respectively. A combination of fever, cough, or dyspnea could identify 94.8% and 96.5% of patients in groups II and III, respectively.

Conclusions: A substantial proportion of patients who developed hypoxia poorly perceived and reported dyspnea. Those at risk of COVID-19 who experienced fever, cough or dyspnea should be screened with pulse oxyhemoglobin saturation for hypoxia. Otherwise, panic for silent hypoxia is unnecessary.

Table 1. Clinical characteristics of 130 patients hospitalized for COVID-19 stratified by the required respiratory support

| Room air n=43 | O2 cannula/mask n=58 | Mechanical ventilation n=29 | p-value |
|---------------|----------------------|-----------------------------|---------|
| Age           | 57.7±15.0            | 67.5±17.4                   | 67.3±9.5 | 0.779 |
| Female        | 23 (53.5%)           | 22 (37.9%)                  | 12 (41.4%) | 0.294 |
| Body mass index | 24.1±4.4            | 25.1±4.3                    | 27.3±5.4 | 0.029 |
| Fever         | 20 (46.5%)           | 37 (63.8%)                  | 23 (79.3%) | 0.017 |
| Cough         | 18 (41.9%)           | 30 (51.7%)                  | 18 (62.1%) | 0.238 |
| Dyspnea       | 10 (23.3%)           | 29 (50.0%)                  | 19 (65.5%) | 0.001 |
| Anorexia      | 16 (37.2%)           | 21 (36.2%)                  | 15 (51.7%) | 0.342 |
| Malaise/weakness | 9 (20.9%)           | 25 (43.1%)                  | 12 (41.4%) | 0.052 |
**Subjects and Methods:** We retrospectively studied 351 COVID-19 patients (178 males and 173 females, mean age 59.3 years) admitted to our hospital between April 3, 2020, and May 31, 2021. According to the severity of illness classification by the National Institutes of Health (NIH), USA, the cases were classified into four groups (mild, moderate, severe, and critical). A comparative study was conducted on background factors such as underlying diseases, clinical test values, and the spread of opacity in computed tomography (CT) chest imaging.

**Results:** Exacerbation factors included age, underlying diseases (diabetes mellitus, interstitial pneumonia), low lymphocyte count, high D-dimer values, and the extent of opacity on CT chest imaging. Multivariate analysis revealed concomitant diabetes mellitus and a wider area of opacity on CT chest imaging as independent exacerbation factors.

**Conclusion:** Concomitant diabetes mellitus and the extent of opacity on CT chest imaging were associated with exacerbation in COVID-19 patients.

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**P5-34 | Long-haul COVID-19 among University of Santo Tomas hospital-health care workers following hospitalization for COVID-19 pneumonia**

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As we adopting to this pandemic a growing number of frontline healthcare workers are joining the long list of people who have developed COVID-19 “long-hauler”. Healthcare workers who experience post-COVID symptoms struggle to go back to work. Therefore, this emerging problem could threaten our health care system. **Objectives:** To determine the incidence and clinical profile of Hospital-Health Care Workers who have long haul symptoms of COVID 19 following hospitalization.

**Methodology:** Prospective study using questionnaire

**Results:** showed that 22 (44%) out of 25 health workers experienced long haul symptoms. These clinical presentations were observed to be common among those in the 31 to 40 years old and 51 to 60 years old and patients with moderate, severe, and critical COVID 19. The most common comorbidity was hypertension (13; 59.1%), and the duration of long haul SARS-CoV-2 infection was around 2 weeks (8; 36.4%) and more than 9 weeks (6; 27.3%). Shortness of breath (15;68.2%) and fatigue (10;45.5%) were the most common presentation. Patients with hypertension, obesity, and chronic lung disease and, history of smoking, and those who had around 2 and more than 9 weeks of the duration of symptoms also reported similar prolonged clinical presentations of COVID 19 infection.

**Conclusion:** Due to the global scale of this pandemic, it can be expected that the healthcare needs for patients with long haul symptoms will continue to increase in the future. This will challenge and threaten our health care system, if the medical frontliners are crippled due to sequelae COVID-19.

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**P5-35 | Successful treatment of disseminated nontuberculous infection with *Mycobacterium genavense* mimicking malignancy in a patient with anti-interferon-gamma (IFN-γ) autoantibodies**

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Disseminated nontuberculous mycobacterial (NTM) infections are generally seen in immunocompromised hosts. Interferon-gamma (IFN-γ) autoantibodies play a critical role in intracellular infections, including disseminated NTM infections.