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## Letter to the Editor

### Atypical Presentation of Covid-19 in an Older Adult With Severe Alzheimer Disease

We would like to report the case of an Alzheimer Disease patient affected by Covid-19 admitted to the Hospital at Home Service (HHS) of the University Teaching Hospital of Turin, Italy. HHS is a multidisciplinary service operating 7 days a week that can be directly activated by hospital wards to allow early and supported discharge from hospital. Four doctors and 14 nurses operate 7 days a week and look after 25 patients a day, on average. The HHS provides substitutive hospital-at-home care in a “clinical unit” model. Several examinations and treatments can be carried out at home, including blood tests, electrocardiogram, spirometry, pulse oximetry, ultrasonographic investigations, placement of peripherally inserted central catheters, oxygen, and other respiratory therapies, intravenous fluids and drugs, blood transfusions, surgical treatment of pressure ulcers.<sup>1–5</sup>

On March 15th, an 83-year-old woman was admitted to the emergency department from her private home with mild fever (100.4°F) and drowsiness. Her medical

history included only a long-standing history of Alzheimer disease with dysphagia and total functional dependence, and a left arm fracture one month prior to hospitalization. In terms of her mental status, caregivers reported that she was aware of her surroundings at her home, while at hospital admission and during the hospital length of stay she was minimally conscious. She was not able to swallow food and drink, neither to swallow medications. Blood pressure at admission was 80/50 mmHg; she had low oxygen blood saturation (SpO<sub>2</sub> 90%) without dyspnea or cough. Other blood values were the following: WBC 15070 cells/mm<sup>3</sup>, hemoglobin 15.4 g/dL, creatinine 1.81 mg/dL, PCR 89 mg/L. Chest X-Ray was negative for pneumonia. While she did not have any history of exposure to COVID, she underwent nasopharyngeal swab which resulted negative. She was then moved to an Acute Medical Ward, where she was treated with cephalosporin and fluid supplementation with marginal improvement of clinical conditions (oxygen supplementation was stopped) and blood chemistries (creatinine 1.01 mg/dL, PCR 59 mg/L), but persistently high WBC count (14310 cells/mm<sup>3</sup>). On March 23rd, the patient returned home with the support of HHS program. On March 27th a new episode of blood oxygen saturation (SpO<sub>2</sub> 82%–88%) occurred,

associated with diarrhea but without fever. A second nasopharyngeal swab was done, which was positive for Covid-19 infection. According to recommendations from an infectious disease specialist, the patient was treated only with supportive measures, including oxygen supplementation, parenteral nutrition, low-dose heparin, and corticosteroids (betamethasone 8 mg twice daily). It was not possible to administer hydroxycloquine due to an inability to swallow, while the nasogastric tube was not considered appropriate. On April 10th, the patient is still alive and hemodynamically stable.

Along with other cases we have cared for, this case has several clinical implications. First, older patients with dementia and Covid-19 infection may present with mild and atypical symptoms, i.e., namely diarrhea or drowsiness. Second, a negative nasopharyngeal swab does not exclude COVID-19 infection if there is a high clinical suspicion. Third, although these frail older patients have reduced chances to survive this infection, adequate supportive measures may improve survival even without the use of targeted therapies of uncertain and unproven benefit. Some of these patients may die for final worsening of general health status during Covid-19 infection rather than for the infection itself. Indeed, in frail, bedridden patients

with dementia, poor nutrition, dehydration, and other clinical complications occur commonly during even mild infective illnesses, and are well recognized risk factors for accelerated worsening health status and death, without the provision of adequate supportive measures. Hopefully, immediate activation of such supportive measures in infected patients with mild disease and without indications for hospital admission might reduce the high mortality rates for Covid-19 infection which are increasingly reported from most long term facilities.

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#### AUTHOR CONTRIBUTION

Gianluca Isaia, Vittoria Tibaldi and Cristina Tamone collected the data and provided substantial contributions to the conception of

the work. Writing support was provided by Gianluca Isaia assisted by Mario Bo. Gianluca Isaia, Renata Marinello and Mario Bo revised the paper critically for important intellectual content.

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#### DISCLOSURE

*The authors report no funding to disclose or conflicts with any product mentioned or concept discussed in this article.*

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