

A Case of Long-Covid 19 in the Infectious Diseases Department of Brazzaville University Hospital and Review of the Literature

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ABSTRACT

Long-Covid 19 is one of the evolutionary modalities of SARS-Cov2 disease, common but often underestimated. This is a health concern of international concern in connection with the appearance of new signs and symptoms related to Covid-19 and persisting beyond twelve weeks (three months) without these signs being related to another pathology. Persistent inflammation related to the host immune response is one of the identified causes. Females are the most affected, as we describe in a 38-year-old patient with a history of Covid-19 in whom the virus was suppressed from the first episode.

Key words: Long-covid-19, inflammation, CHU, Brazzaville.

INTRODUCTION

Long-covid 19 is a health concern that poses a public health problem in connection with high morbidity and mortality. The main features of long-covid are multisystem involvement and fluctuating, prolonged symptoms such as fatigue, dyspnea, cough, anosmia, dysgeusia and others [1]. According to the World Health Organization, 10-20% of former covid-19 cases are affected by this condition, and 145 million people worldwide are affected [2]. In Europe, 7 million people are affected, and 30% of people in the USA have persistent symptoms after 9 months. In Africa, as in the Congo, few data are available on this condition, either because of underestimation of symptoms or weak diagnostic capabilities, as in the case of a patient who travelled through several departments before being diagnosed and treated in the infectious diseases department.

MEDICAL OBSERVATION

A 37-year-old single patient of Malian nationality with no particular medical or surgical history, who had not been vaccinated against covid-19, was admitted to the Infectious Diseases Department of the Brazzaville University Hospital on December 27, 2022 for management of prolonged dyspnea and physical asthenia in a febrile setting.

The onset of the disease dates back to October 2022, with the appearance of a dry cough associated with progressively worsening dyspnea and a fever of 38.9°C. This prompted a consultation at the CHUB, where the diagnosis of SARS Cov-2 was confirmed by RT-PCR, and the patient was admitted to the infectious diseases ward from December 5 to 19. Declared cured after symptoms disappeared and the control RT-PCR was negative, she was discharged from hospital. Two months

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later, intense physical asthenia and dyspnea appeared. The patient again consulted the CHUB, where she was referred to cardiology and stayed for 4 days without success. Persistent fever, increasingly intense physical asthenia and worsening dyspnoea prompted a chest X-ray showing an alveolar-interstitial syndrome (Figure 1). Given this finding, the patient was transferred to the infectious diseases department for further management. Her history showed that she had not been vaccinated against Covid-19.

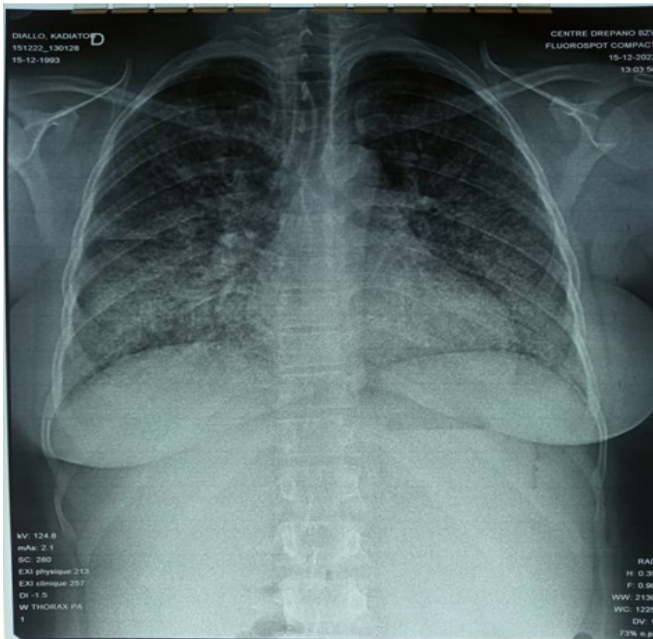


Figure 1. bilateral alveolar-interstitial opacities on chest x-ray.

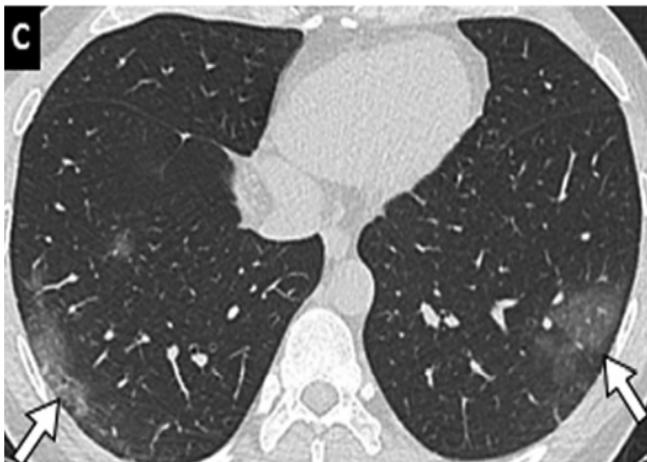


Figure 2. Range of frosted glasses during long-Covid-19 on CT.

On arrival, general examination revealed a patient in fairly good general condition, with good mucocutaneous coloration, anicteric. Temperature 39°C, BP 140/80 mm Hg. Crackles in both lung fields. CRP 89.4 mg/l, D-Dimer 2000, procalcitonin 0.18ng/ml, anti DNA-native AC negative. Anti-smooth and

striated muscle antibodies were not measured. The blood count showed a hyperleukocytosis of 19.5 x10³/mm³ and the CT scan showed areas of frosted glass (Figure 2). RT-PCR was negative. The diagnosis of long-Covid-19 was accepted. The patient was treated with an anti-inflammatory (dexamethasone 20 mg/d), anticoagulant (Lovenox 0.8 IU twice/d), antihistamine (Phenergan 25mg/d) and psychological care. Symptoms improved at days14, and the patient was discharged at days18 of hospitalised.

DISCUSSION

According to the World Health Organization (WHO), the post-COV-19 condition occurs in people with a history of probable or confirmed SARS CoV-2 infection, usually 3 months after the onset of COVID-19 with symptoms and lasting at least 2 months and cannot be explained by any other diagnosis [2]. Any Covid-19 sufferer can develop long-standing Covid-19, and symptoms may be new after initial recovery, or even persist from the initial illness. Symptoms may fluctuate or relapse over time [1,2]. Although male gender and advanced age are associated with a higher risk of severe Covid-19, women appear to present with Covid-long symptoms at a higher prevalence than men (23.6 Vs 20.7%), and people aged 35 to 49 seem to be more often affected by Covid-long than other age groups [1]. Persistent physical asthenia is the main warning sign found in long-covid-19, as reported by Slama in a cohort of patients who consulted the Hôtel Dieu hospital in Paris, France. This symptom appears persistently, depending on whether the initial Covid infection was documented or not [3]. In Europe, Augustin and colleagues report persistent physical asthenia after seven months in 14.2% of patients [3,4].

While fever is the main symptom during the acute phase of Covid-19, physical asthenia, as reported in a study by Salmon and colleagues, is the most frequent symptom in 77.7% of post-Covid-19 cases [5,6,7]. Several pathophysiological hypotheses have been put forward for the persistence of symptoms associated with long-covid-19, including viral persistence in certain reservoirs such as muscles, prolonged inflammation with recruitment of mast cells and monocytes, and abnormalities or deficiencies in innate or adaptive immunity [8,9,10,11]. In some patients, the virus may well have disappeared after infection, but it is the initial inflammation, once triggered, that causes the immune system to go haywire, as was the case in this patient. The tissue damage hypothesis, on the other hand, suggests the role of the initial infectious episode in the appearance of long-lasting lesions in certain organs, as seen on our patient's imaging, which revealed areas of frosted glass [5,8,11]. Our patient had not been vaccinated against covid-19, which would partly explain why her symptoms persisted for so long. Indeed, the efficacy of

vaccination against covid-19 on symptoms in patients with long-Covid has been proven. In a study investigating the benefit of this vaccination approach, the authors reported in a matched series of vaccinated versus unvaccinated long-Covid 19 cases, that the proportion of long-Covid 19 patients in complete remission who had been vaccinated in the background doubled after days compared with unvaccinated patients [12]. Treatment of long-Covid-19 does not seem to differ too much from that of classic Covid. Four therapeutic strategies seem to be proposed [1,13]: symptomatic treatment with steroidal and non-steroidal anti-inflammatory drugs, and functional rehabilitation, which remains at the heart of management. This consists of respiratory physiotherapy in the case of hyperventilation syndrome, olfactory physiotherapy in the case of smell disorders, and sports physiotherapy in the case of deconditioning. Re-education is designed to be progressive and adapted to each patient's capabilities, as was the case here. The third approach is to provide patients with all the information they need for self-management. Patients should be made aware of the circumstances triggering their symptoms and their limitations, and they should be encouraged to continue with even the most minimal physical exercise. Finally, the management of anxiety and depressive disorders see functional...

CONCLUSION

Long-Covid 19 remains a frequent but sometimes underestimated condition among hospital practitioners. Symptoms are polymorphic, and may fluctuate or relapse over time. All devices can be affected. It is therefore essential to maintain sentinel surveillance at the CHUB, and to maintain the long-covid-19 reflex in any former Covid patient who is unwell.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest in connection with the present study.

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