The usefulness of imaging tests for the diagnosis of the disease is indisputable. A prior study found that residual lesions were common on chest CT scans after SARS-CoV-2 pneumonia, and could persist up to 4 weeks after the onset of symptoms.[2] Therefore, it is advisable to do follow-up of lung lesions until they resolve. However, performing this follow-up using chest CT scans carries a number of disadvantages, such as limited access due to high numbers of patients and radiation exposure on the part of the patients. On the other hand, pulmonary ultrasound is proving a suitable imaging tool for diagnosis and follow-up in this type of patient. It is harmless; it is done quickly following simple, easy-to-use protocols; and its findings correlate well with chest CT scan findings.[3]

Residual pulmonary fibrotic changes can lead to a restriction of physical activity due to the shortness of breath caused by decreased lung function, resulting in a lower quality of life.[2]

In the short term, pulmonary rehabilitation is aimed at relieving dyspnoea and anxiety; in the long term, it is aimed at recovering the patient's maximum functionality, improving their quality of life and facilitating their integration into society.[6] It is important that respiratory physiotherapy exercises are indicated on an individual basis. Therefore, it will be necessary to perform a prior comprehensive evaluation by means of a six-minute walk test and a stress test.[3]

A previous study[7] found that the majority of asymptomatic COVID-19 patients did not develop symptoms during a brief three-week follow-up period. As far as we know, this is the first case that has suggested the possibility that asymptomatic patients may also develop late symptoms in the natural course of the disease. It is expected that, as the prevalence of the disease increases, visits will also increase for persistent symptoms after recovery from the infection.[8] Some of these symptoms may not be easily attributed to COVID-19, such as dyspnoea on exertion, and may show a suitable response to home-based pulmonary rehabilitation, if detected.

Serological diagnosis may be important in confirming SARS-CoV-2 infection, especially in cases in which RT-PCR testing is not available and cases in which the onset of symptoms was more than two weeks earlier.[9] Still, the risk of false positive results, especially if interpreted in isolation, should not be overlooked.[9,10]

For epidemiological surveillance and disease detection campaigns, a combination of RT-PCR, serology and lung ultrasound could more accurately diagnose current and past COVID-19 infection.[10] In this health emergency, it is important to use a suitable strategy for diagnosis to identify asymptomatic carriers who could be responsible for the spread of the disease, especially in places where the prevalence of the disease is high, such as hospitals.[11]

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Surgical site infection by *Mycobacterium senegalense* in a pediatric patient☆

Infección de herida quirúrgica por Mycobacterium senegalense *en paciente pediátrico*

Nontuberculous mycobacteria (NTM) can cause skin and soft-tissue infection. Although uncommon, cases of surgical wound infection have been reported. Their diagnosis is important for proper treatment.

We report the case of a 4-year-old girl who underwent surgery for a congenital melanocytic nevus 6 cm in diameter on her right thigh. Five days after surgery, she presented swelling of the surgical site. This was treated with amoxicillin/clavulanic acid. Nevertheless, the lesion increased in size, and wound dehiscence occurred. She underwent surgery again after 20 days and debridement was performed.

Exudate samples were seeded on standard non-selective media, blood agar and chocolate agar, as well as on specific media for mycobacteria: Löwenstein-Jensen and Bactec MGIT 960 liquid medium (BD Diagnostics, United States). At 72 h, tiny, translucent colonies grew. These colonies were identified using MALDI-TOF mass spectrometry (Bruker Daltonics GmbH, Leipzig, Germany). The strain was identified as *Mycobacterium senagalense* with a score of 2.1. Given the high genetic similarity between *M. senegalense* and *Mycobacterium conceptionense*, which was recently reported,[1,2] the species were distinguished by biochemical and growth characteristics.[3] Specifically, *M. senegalense* was positive for inositol and negative for mannitol, and it grew at 42 °C,

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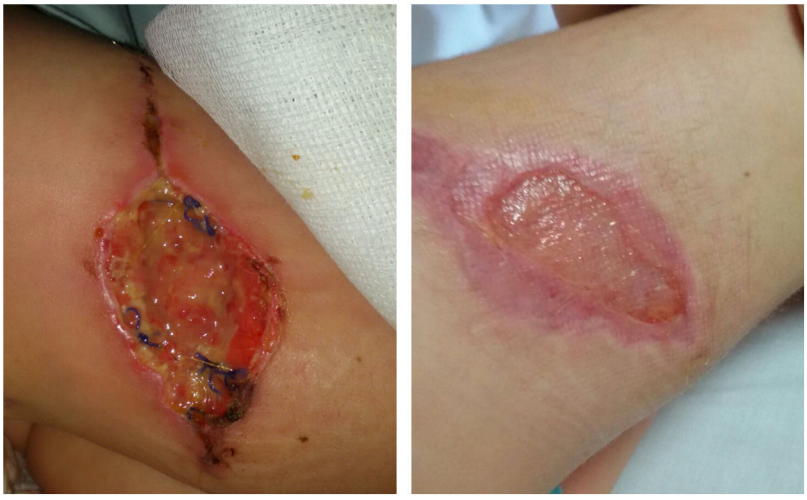

Fig. 1. Appearance of the injury prior to debridement and after two months of treatment.

which confirmed the diagnosis. In the antibiotic sensitivity study using Etest®, the strain was sensitive to amikacin, ciprofloxacin, clarithromycin, doxycycline, cotrimoxazole and imipenem, and resistant to tobramycin and linezolid.

Treatment was started with ciprofloxacin and clarithromycin. Subsequently, the patient presented surgical wound dehiscence again. A decision was made to close the wound by secondary intention. Co-trimoxazole was added, then suspended after 20 days due to leukopenia.

An ultrasound showed no muscle involvement. The patient followed a favourable course (Fig. 1). She remained afebrile, without elevation of acute-phase reactants. Immune studies were normal. A genetic test for Mendelian susceptibility to mycobacterial disease showed no mutations.

M. senegalense is a pathogen related to diseases of cattle on the African continent (bovine farcy). It belongs to the group of rapidly growing NTMs, and is isolated in water, soil and animals. It is capable of forming biofilms, which makes it difficult to eradicate. *M. senegalense* belongs to the *M. fortuitum* group, which includes other species such as *M. peregrinum, M. mageritense, M. septicum, M. houstonense, M. boenickei, M. neworleanense* and *M. brisbanense.*

Advances in molecular biology have led to an increase in the diagnosis of these infections.[1] As a human pathogen *M. senegalense* is likely underdiagnosed, due to its similarity to other mycobacteria in this group. Through 16SRNA sequencing, Wallace et al. found that 43 isolates previously identified as *M. peregrinum* corresponded to *M. senegalense*.[4]

We found limited references in the literature to *M. senegalense* as a cause of disease in humans. The first reported case was in 2005 in Korea and was related to bacteraemia associated with central catheter infection in a patient with non-Hodgkin lymphoma.[5] Talavlikar et al. reported the case of a girl who, in a domestic accident in which a fish tank broke, suffered various facial injuries in which *M. senegalense* was isolated.[3] In 2019, Maupin et al. reported a case of tibial osteomyelitis in which this micro-organism was isolated.[6] To our knowledge, our case represents the first report of surgical wound infection by *M. senegalense*. NTMs cause nosocomial infections in healthcare institutions in developed countries, where they are usually concentrated in water pipes. Kohsravi et al. found that 7.7% of the mycobacteria isolated in the water pipes of a hospital were *M. senegalense*.[7]

Rapidly growing NTMs are resistant to conventional antituberculosis drugs. This justifies the combined use of antibiotics and points to the need to study the sensitivity of the isolated strain in each case.[8]

In our case, we used a combination of clarithromycin, ciprofloxacin and cotrimoxazole, in the same way as Talavlikar et al.[3] In the other cases reported, the mycobacterium was equally sensitive to these three antibiotics. Currently, there are efficacy and safety data on the use of fluoroquinolones in children, so their use in complicated infections, such as the one we report, would be justified.[9,10]

The duration of treatment is not defined, although prolonged regimens are recommended; in our case, the duration of treatment was six months. In addition to antibiotic therapy, given said capability of forming biofilms, surgical debridement should be performed in skin and soft-tissue infections.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

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COVID and CARE®. Mobile application for monitoring SARS-CoV-2 positive patients after hospitalization

COVID and CARE®. Aplicación móvil para el seguimiento tras hospitalización de pacientes SARS-CoV-2 positivo

Dear Editor,

Due to the current health scenario marked by the SARS-CoV-2 pandemic, the number of people who have required hospital admission in our country amounts to more than 124,000 patients as of 7th of June 2020.[1] Health systems must articulate their resources in an efficient way to improve the continuity of the inter-level assistance, avoiding the risk of under-medical care due to lack of coordination among them.

Currently, post-discharge follow-up of these SARS-CoV-2 patients is usually done by regular telephone consultation. Therefore, there is no continuous, daily monitoring system that allows us to detect early warning symptoms of poor clinical evolution.

The widespread use of smartphones among the population brings with it a growing range of mobile health applications with very different objectives.[2] The level of confidence that such applications deserve is widely debated; however, the role they can play in the increasingly near future is undisputed because of their speed, convenience, ease of use and the connectivity they provide.[3]

The development of COVID and CARE® application arises from the need to provide a continuous and quality home monitoring system to all outpatients discharged after having been hospitalized for SARS-CoV-2. It will allow us to provide a non-presential surveillance system in a period of increased vulnerability and clinical risk through a personalized remote monitoring.

COVID and CARE® is an easily access mobile application based on voluntary participation. After informing the consent, patients will be able to install it in their mobile phones from the first day of the hospital discharge. It has an intuitive and suitable interface for any type of user – including the patient himself or a family representative. The user will be provided with a registration number and a password in order to access and make the initial registration in the application.

In this first access, patients will login with a short questionnaire about age, sex, ICU stay, family support and avilability of pulsioximeter at home ('yes or not' in three last). The user will send twice a day an updated report of his clinical status. An alert will be generated in the device as a reminder in the enabled schedules, displaying a short survey of 5 questions about the clinical situation with default answers (Fig. 1): 'how are you today?', 'do you feel shortness of breath?', 'do you have persistent cough?', 'temperature' and 'SatO2' (just appears if patient answer avilability of pulsioximeter).

Each response has been assigned a numerical value according to severity criteria. Scores has been associated by physicians, trying to simulate the importance they give to these answers during a clinical interview in their medical experience, scoring higher objective signs that subjective symptoms, and according with recommendations given by Servicio Andaluz de Salud on telephone monitoring.[4]

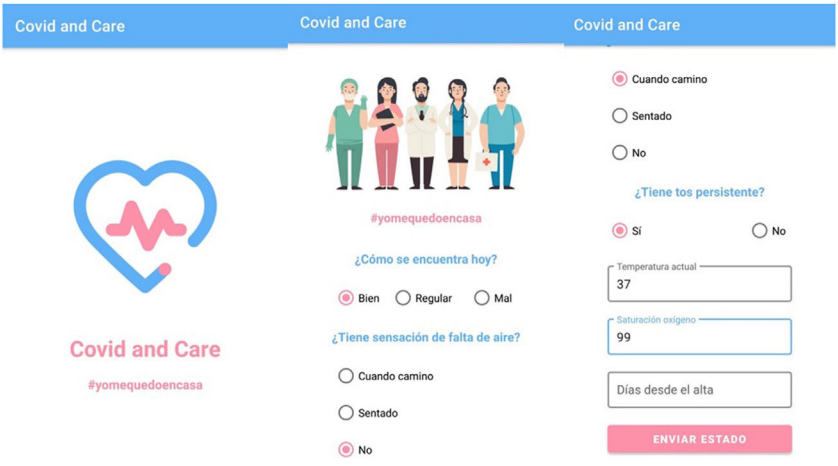

Fig. 1. Screenshots of the app.