this approach reported in the current international literature, but this measure is completely accepted by its users.[4–6] With its implementation, we are taking another step to increase patient safety, family quality of life and, ultimately, to make paediatrics practice more humane. The use of home serum sodium monitoring could facilitate patient discharge, reduce the frequency of readmissions and the associated lengths of stay, reduce the number of visits to health care centres, allow an earlier return to school, work and leisure activities and open more time for children to enjoy their childhoods. A structured educational programme is essential in this approach to facilitate adherence to treatment by the family and good communication between health professionals (nurse-paediatrician) and between levels of care (primary care-hospital-based care).

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PCR test for SARS-CoV-2 persistently positive. Virus detection is not always COVID-19☆

Test de PCR a SARS-CoV-2 persistentemente positivo. No siempre la detección del virus es COVID-19

To the Editor:

From December 31, 2019, when the detection of 27 cases of pneumonia of initially unknown aetiology was reported, to present, when there are more than 11 million confirmed cases of coronavirus disease 2019 (COVID-19), our knowledge about severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been increasing. In Spain, the Asociación Española de Pediatría (Spanish Association of Pediatrics) created a specific working group[1] and we have at our disposal the entire international scientific output of the past months. However, several aspects of this disease remain unknown. The duration of the period of infectiousness and viral shedding is still under investigation. Based on the most recent evidence, the period during which polymerase chain reaction (PCR) tests for SARS-CoV-2 are positive is longer than the period of infectiousness. Some studies have evinced absence of viral culture viability despite positive PCR tests in samples with viral loads of less than 10^5 copies RNA/mL.[2] Other studies have reported positive PCR tests following negative tests and clinical recovery, but this new detection has not been associated with clinical worsening or transmission to contacts in any case.[3] Although this is known,[4] there are cases in which uncertainty arises in clinical practice and we need to rely on different aspects to discern between prolonged viral shedding, detection of nonviable microorganisms, reinfection or reactivation.

What differentiates the case presented here from others is the positive detection of SARS-CoV-2 by PCR more than 50 days after the first positive test in association with respiratory symptoms. The patient was a girl aged 4 years that received a diagnosis of SARS-CoV-2 infection on March 31, 2020 based on a positive PCR test after presenting with isolated fever of 5 days' duration. The fever was managed at home, with a good outcome and full resolution after 6 days of illness. A follow-up PCR was not performed at the time to confirm clearance of the virus. On May 20, 2020 the patient presented in our hospital with a new episode of fever with onset 3 days prior, this time associated with cough and moderate respiratory distress. The physical examination revealed mild chest retractions and disseminated subcrepitant rales predominantly on the right side, and the haemoglobin concentration remained at 95%. The chest radiograph revealed peribronchial cuffing with a mild infiltrate in the right lower lobe. The salient findings of the initial blood workup were a white blood cell count of 15.7×10^9/L, with 84% neutrophils, and a level of C-reactive protein of 159 mg/L and a procalcitonin (PCT) level of 0.38 ng/mL. The patient received a diagnosis of superinfection in the context of bronchitis and was admitted to hospital to receive inhaled bronchodilators and intravenous antibiotherapy; she did not require oxygen therapy during the stay. Per the current protocol, we performed SARS-CoV-2 and respiratory pathogen panel PCR tests at the time of admission. The PCR test for detection of SARS-CoV-2 was positive again. The results of the blood tests were not positive for any other indica-

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tors typically found in this infection or markers of severity (total lymphocytes, 1.4×10^9/L; D-dimer, 488 ng/mL; lactate dehydrogenase, 270 U/L; interleukin-6, 17.85 pg/mL; ferritin, 78 ng/mL). The PCR panel was negative for viruses. This panel also included automatic testing for 7 bacterial species and was positive for *Haemophilus influenzae*. Antibiotherapy proceeded. Given the positive result of the PCR test for SARS-CoV-2 e 50 days after the initial positive PCR result and the associated respiratory manifestations, additional tests were performed for detection of antibodies against SARS-CoV-2 by means of immunochromatography (IC) and ELISA, which yielded positive results for IgG (IC +/ELISA, 8.49) and negative results for IgM (IC −/ELISA, 0.26). After nearly 72 h of intravenous antibiotherapy, the patient showed clinical improvement with resolution of fever and decreasing levels of inflammatory markers. In light of these results, the clinical outcome and microbiological tests, we approached the illness as a case of respiratory superinfection in the context of bronchitis, with shedding of SARS-CoV-2 that was not replication-competent. The day of discharge, another viral PCR test was performed, yielding the first negative result 55 days after the initial test.

The high frequency of respiratory illnesses in childhood may be a source of confusion in the efforts to control the SARS-CoV-2 pandemic. To prepare for periods when SARS-CoV-2 will coexist with other respiratory viruses, we believe it necessary to develop scores combining clinical, laboratory and microbiological parameters to guide the initial differentiation between an acute SARS-CoV-2 infection or a different type of infection in the context of a past episode of COVID-19 with prolonged viral shedding.

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