

LETTER TO THE EDITOR

Experience of a pediatric electrophysiology clinic during the COVID-19 pandemic

To the Editor

Providing high-quality clinical care is crucial during the current coronavirus disease (COVID-19) pandemic, it is especially true for pediatric patients. The main reasons for hospital admission or medical contact in the selected population of pediatric cardiac electrophysiology (EP) patients are interventional procedures (both device implantation and electrophysiological study and ablation), device follow-up, and ambulatory consultations. The growing number of cases of COVID-19 and the need to reduce the viral spread, led to substantial changes in providing care to patients with any kind of cardiac disease, as reported in previous issues of this Journal.¹⁻³ Here, we report the transformations in the care of pediatric EP patients during the pandemic at ASST Papa Giovanni XXIII, Bergamo, one of the areas most affected by COVID-19 in Italy. The pediatric electrophysiology clinic has several activities that were routinely performed *in-person*: they ranged from medication dispensation (during which body weight is checked) to ambulatory visits, on average around 350 per year, and to hospital admissions for EP and pacing procedures. During the last week of February 2020, in line with internal protocol guidelines, we stopped every non-urgent procedure. To answer patients' and parents' questions about the impact of COVID-19, and to give quick access to care in case of emergency, we developed a new protocol administered over the phone, with a dedicated physician investing about one-third of their working time in this activity for. By June 2020, we had received more than 50 calls, from 32 patients. Since at our Institution every patient under 18 years old with a cardiac device (except for patients with Microny SR; Abbott Laboratories) is remotely monitored, we encouraged daily or weekly remote checks, and postponed ambulatory visits, unless alarms indicated the need for an *in-person* consultation, for example, for battery replacement. This change in practice was possible using the same personnel because of the reduction in the need for ambulatory visits of technicians and nurses. Routine clinical follow-up of pediatric patients was postponed and phone contact, based on disease type and clinical course, was scheduled for every patient. In case of difficult or impossible phone contact, or in the event of urgent needs that could not be addressed over the phone, ambulatory consultations were organized in line with social distancing guidelines (e.g., only one parent and strict timetable in order to reduce inter-person exposure). This reduction of outpatient activity

led to a reduction in visits of approximately 90% in the first 2 months and 50% in the subsequent 4 months. Patients taking hospital-dispensed drugs (such as flecainide or propranolol) were asked not to access the hospital. Instead, a caregiver was provided with a drug notice renewal following a phone consultation. We implemented a completely revised setting for hospital admission after June 2020 to ensure safety during hospital stays for EP procedures: children admitted to the hospital are requested to stay in single bedrooms, access to a shared playroom is forbidden, and only one parent is allowed to enter the ward, both child and parent are tested with nasal swabs for severe acute respiratory syndrome (SARS-CoV2) within 48 h before admission to hospital. This limited the number of procedures that could be performed, especially if a patient tested positive and their place was then offered to another patient, although it was not always possible to find a replacement given the short timeframe. We selected a COVID-19 free EP-lab where only patients who tested negative with a nasal swab (at least 72 h before intervention) underwent procedures. In addition, the length of stay is reduced as much as possible in order to lower the in-hospital exposure of pediatric patients, general anesthesia is performed with dedicated COVID-19-free equipment. The impact of COVID-19 on the number of procedures performed has been dramatic: there was a reduction of about 80% (42 vs. 9 procedures, 78.8% reduction) during the first semester of 2020 if compared to 2019. All procedures in 2020 were performed only during the months of January–February. A sensitive issue for caregivers was anxiety related to the delay in interventions and fear of infection because of medical contacts: when examining the main reasons for medical contact, in 70% of phone calls parents asked when and how an elective procedure would be re-scheduled; about 30% asked for post-pone an ambulatory visit or a procedure because of fear of infection or imposed restrictions; in 25% of cases among reasons for a phone call was asking advice for therapeutic modifications and arrhythmia-related symptoms; finally, about 15% of calls were about confirmed or possible COVID-19 symptoms and subsequent medical consultations with patients with a history of the arrhythmic disease. In the first period of the pandemic, thanks to the numerous changes implemented patients' outcomes did not seem to be affected: We did not observe any adverse event in our chronic patients, although it is difficult to say whether incident cases may have received less efficient or timely care.

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In conclusion, our experience suggests that in such an unprecedented situation, a phone-based approach, together with a strong relationship with parents and young patients, resulted in the efficient follow-up of every child irrespectively of several different characteristics.

KEYWORDS

COVID-19, electrophysiology laboratory, pediatric cardiac electrophysiology, preventive protocol, telemedicine

CONFLICT OF INTEREST

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