

LETTER TO THE EDITOR**Telemedicine during COVID-19 pandemic**

Since 2015 most patients implanted with cardiac devices (implantable cardioverter defibrillators (ICDs), implantable loop recorders (ILRs), pacemakers (PMs)) at Santa Croce e Carle Hospital (Cuneo, Italy) are remotely followed with home monitoring systems free of charge. From 2017 the home monitoring outpatient follow-up service has been systematically organized mainly for the peculiar geographical features (typically mountainous, vast and with few roads) of the territory served by our hospital, making difficult for patients the access to the health care facilities.

We experienced a significant reduction in outpatient devices follow-up, letting us to remotely follow the devices' technical aspects and patients' clinical features thanks to new algorithms. Modern devices are able to monitor hemodynamic compensation, arrhythmias, physical activity's level, thoracic impedance, allowing clinicians to optimize medical therapy just using telephonic contact, in agreement with GP.

We have 454 patients (373 pts—ICDs/Cardiac resynchronization therapy defibrillators (CRT-Ds), 11 pts—PMs/Cardiac resynchronization therapy pacemaker (CRT-P) and 70 pts—ILRs) followed with home monitoring systems, with automatic and periodical transmissions regarding device setting, clinical features, and alarms. This strategy, structured in all its procedural aspects, has been fundamental during the spread of COVID-19 pandemic, because of the strict reduction in the outpatients activity and the limited access to the hospital: all patients were instructed to send an extra manual transmission at new symptoms onset or recurrences, screened by our staff 3 days per week for "routine" transmissions and every day for alarm-related ones. Based on those transmissions and on clinical algorithm summary, we were able to improve therapies: in a month since the spread of COVID-19 pandemic, we performed 460 routine controls. The analysis of further 53 alarm transmissions led in 26 cases to therapeutic variations: for 10 patients diuretics were increased for volume overload, for four diuretics were decreased due to hypotension and a good fluid balance, for five patients with nonsustained ventricular tachycardias (NSVTs) beta-blockers were increased, for two antiarrhythmic therapy was started following appropriate device interventions, and for four patients oral anticoagulation was begun for detection of new onset of atrial fibrillation. In one case, we performed PM implantation following the detection of pathological pauses at ILR monitoring implanted for unexplained syncope.

Our telemedicine experience based on home monitoring control, has been consolidated through the years and it has already been proven to be effective and safe. In this health global emergency it has been crucial to follow patients with chronic heart disease, at high risk of mortality for COVID-19, containing and reducing their possibility of contagion. A similar strategy was applied by the group of Rubin¹: every patient was discharged with remote monitoring device to minimize vulnerable patient exposure to the high-risk hospital setting.


This new clinical approach, which implies extensive workload, time-spending, and specific knowledge, and in our reality carried by the "good will" of the operators involved, will be in the future recognized and dignified with spaces and time dedicated, and will be recognized as "DRG." Telemedicine is making the difference in this pandemic and maybe it can be more crucial in the future, resulting in a positive synergy between hospitals, patients, and general practice care.

KEYWORDS

Covid-19, home monitoring, implantable cardiac devices, pandemic, telemedicine

CONFLICT OF INTEREST

Authors declare no conflict of interests for this article.

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academic medical center amidst the 2020 coronavirus (COVID-19) pandemic. *J Cardiovasc Electrophysiol.* 2020;31(6):1249–54.

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