

Impact of the COVID-19 pandemic on electrophysiological procedures at a national referral center

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Background - Introduction: The COVID-19 pandemic has generated serious repercussions on the health system, reducing the number of all cardiology procedures worldwide.

Objectives: Describe the impact of the COVID-19 pandemic on the procedures performed by the electrophysiology department in a national referral center.

Methods: We made a retrospective review of our data base and we compared procedures made in the last 3 years since 2017 to 2019 with the procedures made in the 2020. We divide the procedures into two large groups: Cardiac Implantable Electronic Devices (CIED) related procedures (which included implants, revisions, changes, upgrades and extractions) and electrophysiological studies and ablations (which included conventional and complex procedures). Other types of procedures were no included.

Results: There was a significant reduction in all procedures, the average of procedures performed in the last 3 previous years was 467 (there were 479 in 2017, 411 in 2018 and 511 in 2019), while in 2020 we performed only 319 ($p = 0.01$); this represents a reduction of 33.4% in the total number of procedures performed in our center. There was no statistical difference regarding the CIED related procedures, the average of procedures of the last 3 previous years was 174 (there were 186 in 2017, 148 in 2018 and 188 in 2019), and in 2020 we performed 189 procedures, this value is near to the average of the last 3 previous years and very close to the value of the 2019 ($p = 0.46$).

Regarding the electrophysiological studies and ablations, the average of procedures of the last 3 previous years was 293 (there were 293 in 2017, 263 in 2018 and 323 in 2019), while in 2020 we performed only 129 procedures, considerably decreasing compared to the previous years ($p < 0.01$). The reduction in the electrophysiological studies and ablations was 55.97%. The most affected months were April, May and June.

Conclusions: The COVID-19 pandemic considerably affected the number of electrophysiological procedures in our center, reducing it by 33.4% compared to the previous years. The reduction of procedures fundamentally affected the electrophysiological studies and ablations, reducing them by 55.97%. The number of CIED related procedures were no affected.

Electrophysiological procedures

Procedures	2017	2018	2019	2017-2019 average	2020
CIED related procedures	186	148	188	174	189
Electrophysiological studies and ablations	293	263	323	293	129
Total	479	411	511	467	319

Comparative table of the electrophysiological procedures performed in our center in recent years.
Abstract Figure. Comparison of the procedures.

