Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

frequency of inappropriate shocks was similar between those with and without prior sternotomy (n=3/47 and n=16/165, 6% vs 10%, p=0 58). The mechanism of inappropriate shocks included: T-wave oversensing or other oversensing (n=10/19, 52%), atrial fibrillation (n=3/19, 16%), air in pocket or external noise (n=3/19, 16%), and supraventricular tachycardia (n=3/19, 16%).
Conclusion: Implantation of S-ICD in patients with prior sternotomy was not associated with increased risk of 30-day complications or inappropriate ICD shocks.

Table 1. Procedural details and 30-day complications in S-ICD patients without and with prior sternotomy.

	S-ICD patients			
	Overall (N=212)	Prior Sternotomy (n=47)	No Prior Sternotomy (n=165)	p Value
Device/Procedure details				
Sensing vector (Primary)	114 (55)	27 (59)	87 (54)	0.55
Sensing vector (Secondary)	68 (33)	14 (30)	54 (33)	0.71
Sternal coil left of sternum	202 (94)	44 (94)	158 (96)	0.54
Two-incision technique	122 (58)	28 (60)	94 (57)	0.75
DFT Testing attempted	195 (92)	43 (92)	152 (92)	0.91
Successful from 1st attempt	180 (92)	40 (93)	140 (92)	0.84
Success with multiple attempts◊	15 (8)	3 (7)	12 (8)	0.84
30 day complications	21 (10)	4 (9)	17 (10)	0.71
Hematoma with evacuation	2 (1)	1 (2)	1 (1)	0.34
Hematoma without evacuation	2 (1)	1 (2)	1 (1)	0.34
Superficial infection	4 (2)	0	4 (3)	0.28
Deep infection requiring removal	3 (1)	1 (2)	2 (1)	0.64
Lead migration requiring revision	3 (1)	0	3 (2)	0.35
Inappropriate shocks	6 (3)	0	6 (4)	0.19
Upper extremity DVT	1 (0.5)	1 (2)	0	0.06
Late Infection (>30 days)	4 (2)	1 (2)	3 (2)	0.89

◊ Success was defined with a margin >=10J

B-PO04-050

EXERCISE-OPTIMIZED PROGRAMMING CONTRIBUTES TO A LOWER RISK OF INAPPROPRIATE SHOCKS IN THE LATEST GENERATION S-ICDS

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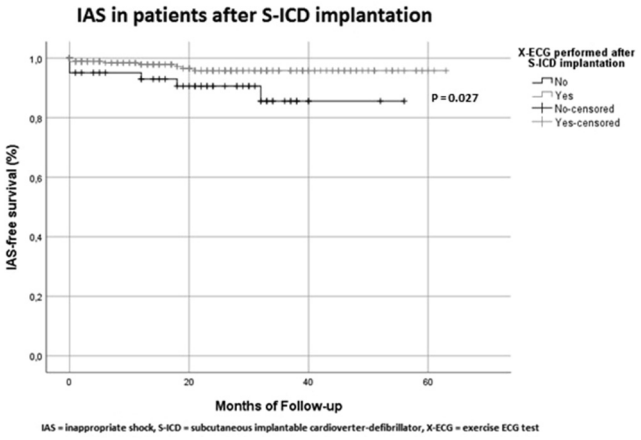
Background: Exercise-optimized programming during an exercise ECG test (X-ECG) after a first generation S-ICD implantation has shown to be successful in reducing inappropriate shocks (IAS). The benefit of performing an X-ECG in the latest generation S-ICDs to reduce IAS is unclear.
Objective: To describe the effect of exercise-optimized programming on IAS rate in the latest generation S-ICDs.
Methods: In this retrospective study, data were collected from two experienced S-ICD hospitals in the Netherlands. All patients underwent an S-ICD implantation of 2nd or 3rd generation. Patients younger than 21 years were excluded.
Results: In total, 263 patients had an X-ECG and 61 had no X-ECG after implantation. Median follow-up time was 22 months in the X-ECG group (IQR 9-33) and 23 months in the no X-ECG group (IQR 12-33, P= 0.996). Mean age was 51 ± 15 years and 61 ± 15 years respectively (P< 0.001). A total of 8 patients (3.0%) experienced IAS in the X-ECG group; 3 first shocks (1.14%) were due to TWOS, 2 (0.8%) were given on a SVT and 3 (1.14%) on other non-cardiac activity. In the no X-ECG group, 6 patients (9.8%) experienced IAS; 1 first shock (1.6%) was due to TWOS, 4 (6.6%) were given on a SVT and 1 (1.6%) on other non-cardiac activity. Patients with an X-ECG had a lower risk of IAS compared to patients in the no X-ECG group (HR 0.32; 95% CI 0.1 to 0.9; P= 0.027). Results are shown in the figure.
Conclusion: This study shows that, in the latest generation S-ICDs, exercise-optimized programming after S-ICD implantation results in a significantly lower risk of IAS in adults. Further prospective data with more equal groups is necessary. Until then, we recommend considering exercise testing in the latest generation S-ICDs.



IAS = inappropriate shock, S-ICD = subcutaneous implantable cardioverter-defibrillator, X-ECG = exercise ECG test

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DEVICE-DETECTED ATRIAL FIBRILLATION DURING THE COVID-19 PANDEMIC

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Background: Remote monitoring allows for timely assessment of device-detected atrial fibrillation (AF). Little is known regarding the effects of the COVID-19 pandemic on the occurrence of AF.
Objective: To determine the association between the COVID-19 pandemic and AF occurrence in individuals with cardiac implantable electronic devices (CIEDs).
Methods: We undertook a multi-center, observational, cohort study over a 100-day period during the COVID-19 pandemic (COVID-19) in the USA Remote monitoring was used to assess AF episodes in patients with a CIED (pacemaker or defibrillator; 20 centers, 13 states). For comparison, the identical 100-day period in 2019 was used (Control). The primary outcomes were AF occurrence during the COVID-19 pandemic, and the association of the pandemic with AF occurrence, as compared to one year prior. The secondary outcome was the association of AF occurrence with per-state COVID-19 prevalence.
Results: During COVID-19, 10,346 CIEDs with an atrial lead were monitored. There were 16,570 AF episodes of ≥6 minutes transmitted (16 events per 1000-patient-days) with a significant increase in proportion of patients with AF episodes in high COVID-19 prevalence states compared with low prevalence states (OR 1 34, 95% CI 1 21-1 48, p<0 001). There were significantly more AF episodes during the COVID-19 period compared with the Control period (IRR 1 33, 95% CI 1 25-1 40, p<0 001). This relationship persisted for AF episodes ≥1 hour (IRR 1 65, 95% CI 1 53-1 79, p<0 001) and ≥6 hours (IRR 1 54, 95% CI 1 38-1 73, p<0 001).
Conclusion: During the first 100 days of COVID-19, a 33% increase in AF episodes occurred with a 34% increase in the proportion of patients with AF episodes observed in states with higher COVID-19 prevalence. These findings suggest a possible association between pandemic-associated social disruptions and AF in patients with CIEDs.