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Extended wearable cardioverter defibrillator use in patients at-risk for sudden death

Abstract: P6417

Extended wearable cardioverter defibrillator use in patients at-risk for sudden death

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Topic(s):

Sudden cardiac death

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Background: Arrhythmia events and outcomes in patients using the wearable cardioverter defibrillator (WCD) for longer than 90 days have not yet been investigated. We aimed to assess arrhythmia events and outcomes in patients with extended WCD use, enrolled in the WEARIT-II registry.

Methods: We analyzed arrhythmia events and outcomes such as ejection fraction [EF] improvement, or ICD implantation, in patients with WCD use ≤ 90 days vs. >90 days in the WEARIT-II registry. Our analyses was further stratified by the etiology of cardiomyopathy (ischemic [ICM] vs. non-ischemic [NICM] vs. congenital/inherited heart disease).

Results: There were 981 (49%) patients with WCD use >90 days (median 120 days), and 1019 patients with WCD use ≤ 90 days. Extended WCD use patients were more likely to non-ischemic (50% vs. 43%, $p < 0.001$). During WCD use, there were 28 patients (2.7%) with sustained VT/VF events in the WCD use ≤ 90 days group, and an additional 13 patients (1.3%) in the WCD use >90 days group, highlighting the value of extended WCD use. Non-sustained VT events, and supraventricular events had similar incidences during short and extended WCD use (12 vs. 16, and 26 vs. 46 patients, $p > 0.05$). One-third of the patients with extended WCD use further improved their EF during follow-up (Figure). This was similar in ischemic and non-ischemic cardiomyopathy, while congenital/inherited heart disease patients were more often implanted with an ICD, regardless of WCD wear time.

Conclusion: In the WEARIT-II registry, patients with extended WCD use >90 days remained at risk for ventricular and atrial arrhythmia events, while one-third of them further improved their EF, avoiding the need for an ICD implantation. The wearable cardioverter defibrillator could further improve risk stratification for an ICD even after the typical 90 day wear period.

End of Use Decision

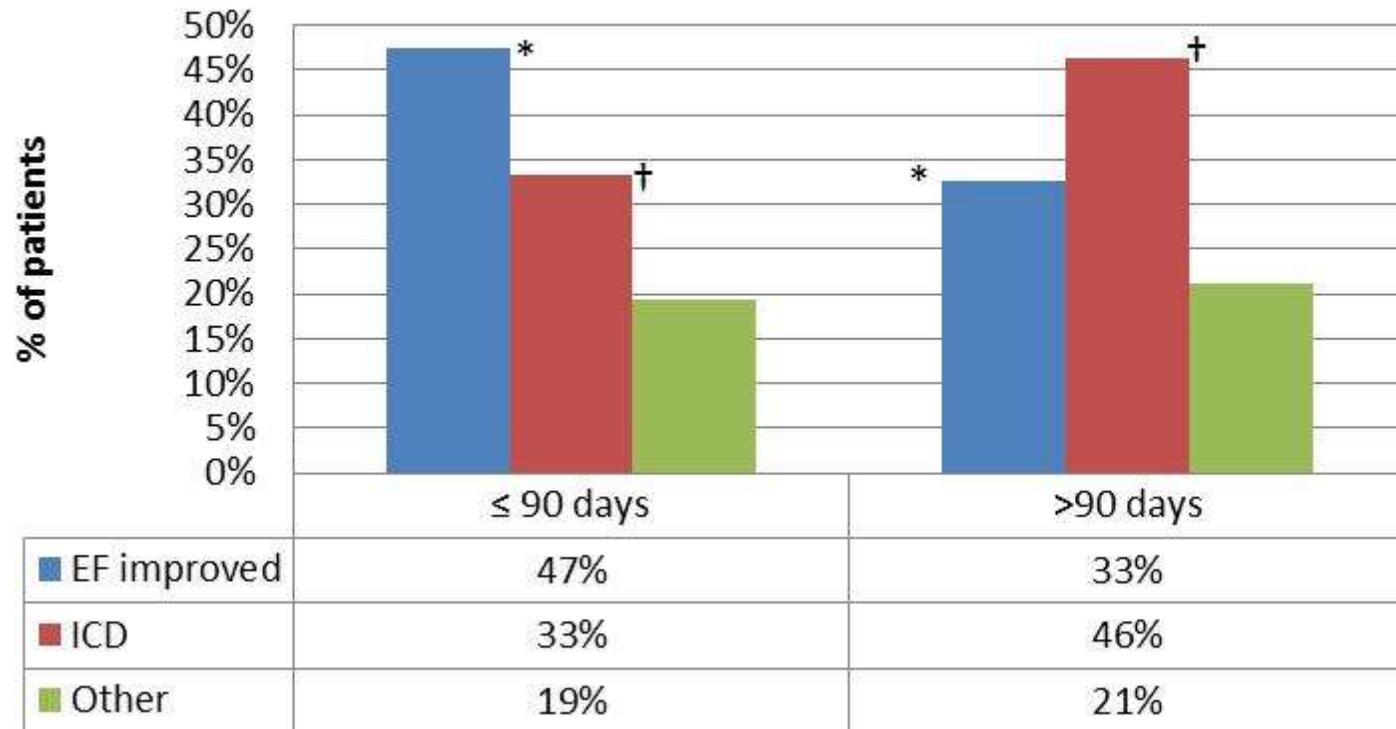


Figure 1