

THE DIGITAL HEARTBEAT: ADVANCEMENTS IN HOME EKG TECHNOLOGY

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INTRODUCTION

The emergence of home EKG devices marks a significant milestone in cardiac healthcare, enabling patients to monitor heart rhythms and detect arrhythmias such as ventricular tachycardia (VT) outside clinical settings. This case report highlights the critical role of such technology in facilitating early intervention for potentially life-threatening cardiac events.

Case Presentation

An 82-year-old male, while exercising, experienced symptoms suggestive of VT. Utilizing a home EKG device, he confirmed the abnormal rhythm and sought immediate medical attention. At the emergency department, initial evaluations showed a sinus rhythm with a first-degree AV block. Despite unremarkable coronary angiography and echocardiography, an exercise stress test triggered monomorphic VT leading to cardiac arrest. Resuscitation was promptly administered, and an Implantable Cardioverter Defibrillator (ICD) was implanted.

RESULTS & DISCUSSION

Reflecting over a century's advancements since Einthoven's work, home EKG devices have evolved from complex, stationary units to portable, user-friendly systems that enhance patient engagement in cardiac monitoring. The swift response and successful resuscitation in this case exemplify the device's potential in preventing fatal outcomes. The case underscores the devices' potential life-saving utility, juxtaposed against the backdrop of evolving market dynamics and technological innovation. Companies like AliveCor and Apple have pioneered devices that embody the shift towards compact, user-friendly designs, catering to a growing consumer demand for health monitoring technologies. As these devices become more integrated into routine healthcare, they represent a paradigm shift towards patient-empowered management of cardiac conditions. The devices' cost-effectiveness, potentially reducing emergency visits and hospitalizations, must be balanced against the risks of false positives and unnecessary medical consultations. These developments hint at a future where technology bridges the gap between patient empowerment and efficient healthcare, emphasizing the importance of ongoing innovation and policy adaptation to maximize public health benefits.

CONCLUSION

In conclusion, this case report underscores the transformative impact of home EKG technology in empowering patients to detect and respond to critical cardiac events promptly. As exemplified by the life-saving intervention in this case, the integration of such technologies into everyday health management can significantly enhance patient outcomes and shift the landscape of cardiac care. Continued innovation and thoughtful integration of these tools into healthcare practices are crucial for leveraging their full potential to improve patient safety and reduce healthcare costs.

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