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A case of an implantable cardiac monitor follow-up: Too little, too late

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Introduction

The implantable cardiac monitor (ICM) is an integral tool used to investigate patients with unexplained syncope when the underlying cause is suspected to be related to a cardiac arrhythmia.[1,2] ICMs have been shown to diagnose 78% of syncope cases, of which 75% of the syncopal events are arrhythmia related.[2]

Case report

We report a 62-year-old female patient with a past medical history of recurrent stroke, seizure disorder, supraventricular tachycardia, chronic obstructive lung disease, and anxiety. Owing to recurrent syncopal episodes, she underwent ICM implantation (Biotronik; Berlin, Germany) in June 2021. Remote monitoring demonstrated multiple episodes of bradycardia due to advanced atrioventricular (AV) block, lasting 3–4 seconds since June. Episodes typically occurred during sleep, and the patient was asymptomatic. A recent remote transmission recorded extended episodes of AV block during the night, with a progression to asystole that led to her death (Figure 1).

These transmissions were sent to the Biotronik website during the weekend and reviewed by an Advanced Practice Professional at our clinic the following Monday. Reviewing these transmissions was difficult and anxiety-provoking for the Advanced Practice Professional. Witnessing the progression of heart block to agonal escape beats, then complete asystole, was demoralizing. A detailed chart review was performed, and the attending electrophysiologist was notified. He was also shaken and frustrated. The staff felt disheartened after contacting the patient's family and learning that the patient died around the event's timing. The question that arose from our experience was, could earlier notification of this actionable detected event have changed this patient's outcome? Her routine ICM transmission was programmed to occur at 2 AM, approximately 1 hour after her event. Since ICMs only transmit routinely once a day, this patient's outcome would have remained unchanged.

Conclusion

Although the ICM is a valuable tool for the diagnosis and management of certain arrhythmias, this case serves as a grim reminder that, even with remote monitoring, there are occasionally instances where therapy cannot be provided quickly enough, and we are left "watching" the terminal events too late to be able to help the patient, leading to emotional distress for the clinic staff.

References

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KEYWORDS Implantable cardiac monitor; Remote follow-up; Syncope; Emotional distress; Advanced practice professional
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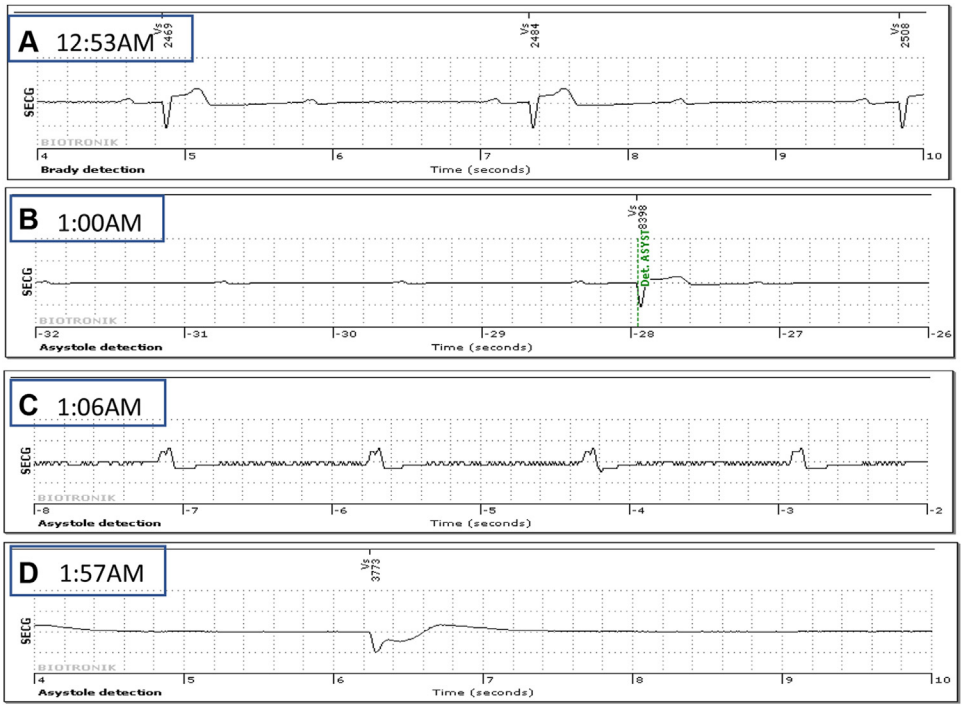

Figure 1 **A:** Sinus rhythm with high-grade atrioventricular block. **B:** Sinus rhythm with ventricular asystole. **C:** Ventricular escape rhythm (agonal). **D:** Sinus arrest and ventricular asystole.