Surviving Ventricular Standstill for 111 Seconds during Holter Monitoring

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Holter electrocardiogram recording revealed symptomatic prolonged ventricular standstill lasting for about two minutes which terminated without any external cardiopulmonary resuscitation.

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first degree AV block; left bundle branch block; ventricular arrest; CPR; pacemaker

CASE REPORT

Atrioventricular (AV) block of high degree is well described in literature¹ and is considered class 1 indication for permanent pacemaker implantation irrespective of symptoms.² Usually it requires urgent medical assistance and external cardiopulmonary resuscitation (CPR) for survival in prolonged ventricular asystole. Surviving such an event with self termination and without any medical assistance is quite rare and rarely mentioned in

the literature. We report a 60-year-old healthy man who came to the outdoor patient department with a history of occasional dizziness for the past year. His physical examination revealed no significant abnormalities. The pulse was regular and supine blood pressure was 130/70 mmHg. The complete blood cell count, routine electrolyte, and renal biochemical tests were within normal limits. 12-lead electrocardiogram (Figure 1) showed sinus rhythm, right axis deviation, first degree AV block with complete left bundle branch block. Echocardiogram revealed

Figure 1. 12-lead electrocardiogram demonstrating normal sinus rhythm, right axis deviation, first degree AV block and complete left bundle branch block.

Figure 2. Holter strip showing normal sinus activity with ventricular arrest lasting for about two minutes terminating with scattered idioventricular beats.

structurally normal heart. Twenty-four hour Holter monitoring was performed with Zymed 3100 device (Zymed, Andover, MA, USA) which revealed (Figure 2) symptomatic ventricular arrest for one minute and fifty-one seconds, which began at 8:32:10 a.m. after a premature beat and ended with single ventricle complex at 8:34:01 a.m. followed by scattered idioventricular beats; it took two minutes and three seconds before baseline rhythm was restored. According to the patient, at that time he felt dizziness and lay down, and was fine after some time. As there was no witness to the event so the mechanism of self-termination is unexplained. The patient was successfully treated with St. Jude DDD permanent pacemaker (St. Jude Medical, St. Paul, MN. USA) and is on asymptomatic follow-up since last year. Criley et al.³ and Neimann et al.⁴ have mentioned a few patients who successfully resuscitated by repeated coughing and termed it cough-induced CPR. Although the mechanism of self-resuscitation is not clear in our case, surviving such a prolonged event of ventricular standstill is a miracle in itself. It certainly throws light on the pos-

sibility of various mechanisms of self-resuscitation which need to be explored.

CONCLUSION

Our case demonstrates the unique example of self-resuscitation after having prolonged ventricular arrest which was recorded on Holter monitoring.

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