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Kasuistika | Case report

Bradycardic variant of sudden cardiac death in patient with left ventricle aneurysm

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One of the causes of death from coronary heart disease is the formation of postinfarction left ventricular aneurysm (PLVA), which is often accompanied by the development of fatal arrhythmias and/or conduction disorders. In our case report we analyzed the ECG changes of a patient with PLVA who died suddenly during ambulatory Holter monitoring.

The patient Y., 80 years old, was consulted on 29 September 2015 by cardiologist because of occasional palpitations. He did not complain of any chest pain, disorders of consciousness or dyspnea on presentation. It is known from anamnesis the he had a myocardial infarction with formation of PLVA some years ago. The actual objective status was not of specific clinical significance. Next day morning he was found without life signs by relatives. Some chosen ECG strips that preceded the fatal incident are shown below.

The base rhythm was sinus regular with predominantly negative T waves and scar signs (Fig. 1). At 17:01 the marked QRS distortion (because of LBBB) was observed. The width of QRS complexes increased. Together with presumably PLVA ECG changes, LBBB and repolarization disturbances QT-interval also increased. Interestingly to state that the above mentioned phenomena heralded bradycardia, which followed along with the low-atrial escaping beats at 19:21. After normalization of QRS width around 23 o'clock (not shown) a new QRS widening followed next day at 06:39 and again together with concomitant bradycardia (Fig. 2). Soon it degraded to sinus arrest and LV asystole, which resolved with slow escaping AV-junction rhythm and remarkable (beyond the LBBB morphology) saddle-like QRS distortion at 6:42. In a minute, after some slow ventricular complexes the morphology of following beats, obviously of supraventricular origin despite the "V"

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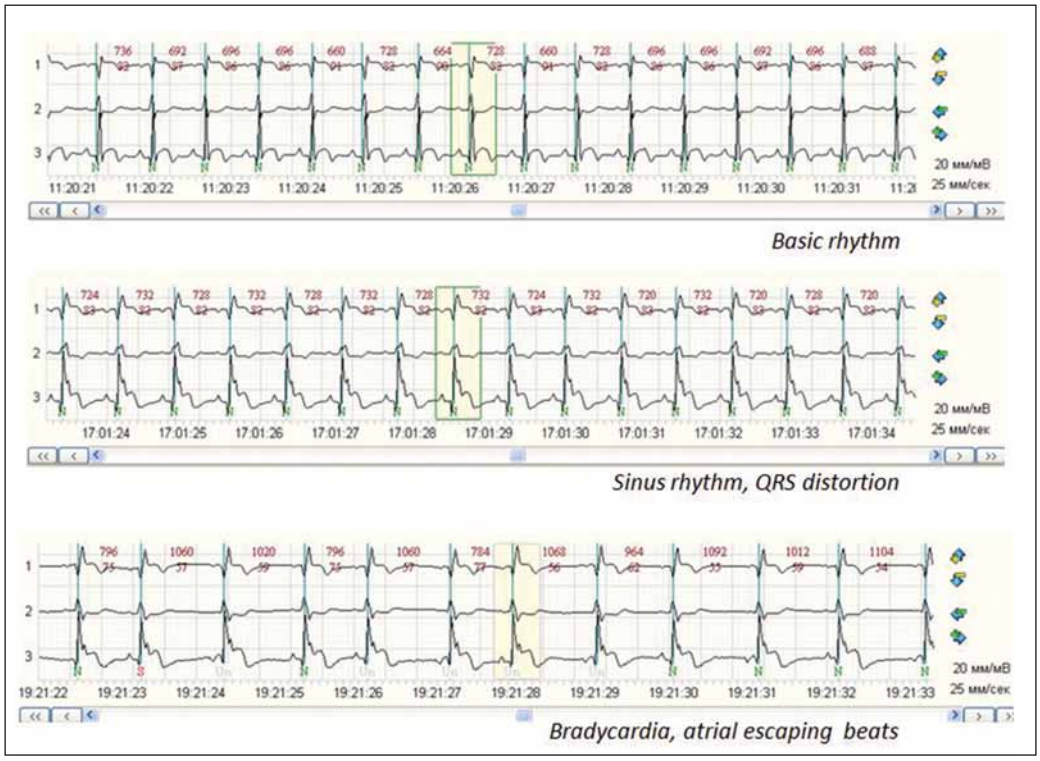

Fig. 1 – ECG phenomena of patient Y.: basic rhythm, QRS-distortion and bradycardia.

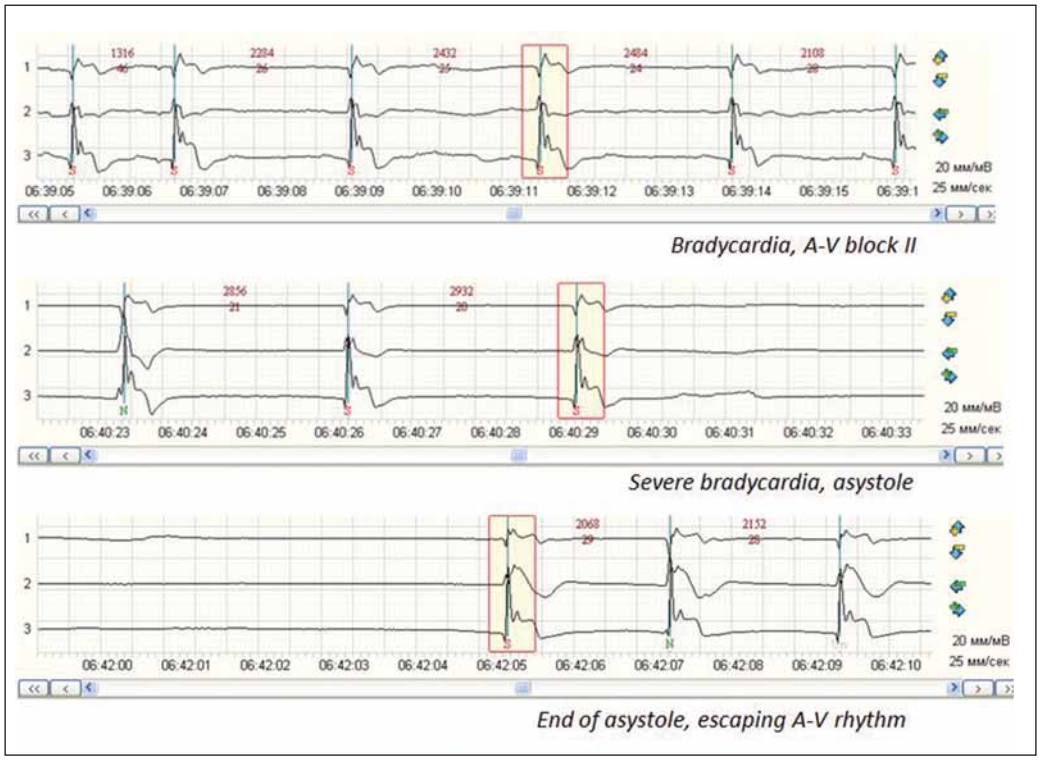

Fig. 2 – ECG phenomena of patient Y.: AV-block, asystole, escaping AV-rhythm.

strip markers distorted even more (Fig. 3). Besides the saddle-like pattern, there were marked ST-elevation and prolongation of QT-interval. Those ECG changed were again prognostic markers of LV asystole, this time fatal.

Conclusions

The presented case demonstrated that patients with PLVA could have a bradycardic variant of sudden cardiac de-

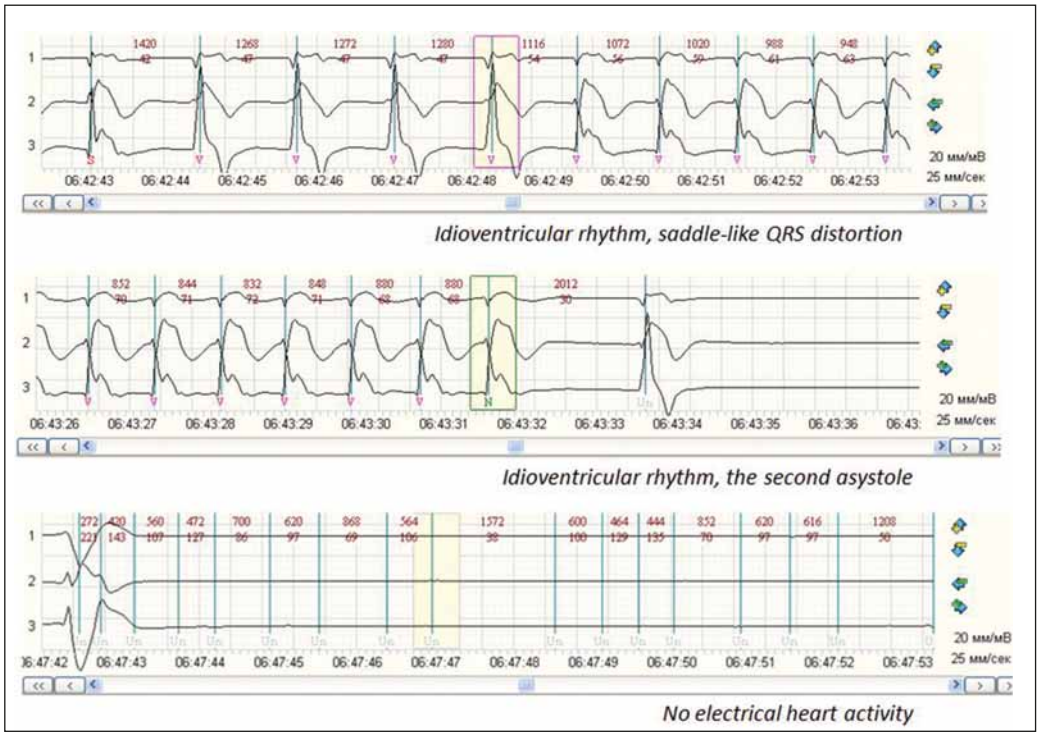

Fig. 3 – ECG phenomena of patient Y.: saddle-like distortion, final asystole.

ath. A sudden saddle-like QRS distortion with or without concomitant LBBB could be precursors of LV asystolia but wide ranged researches needed to prove that.

Conflict of interest
None declared.

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Ethical statement
Authors state that the research was conducted according to ethical standards.

Informed consent
The research was conducted according to ethical standards.