

Cardiac death due to the stroke registered on 24-Hour Holter Monitoring

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This case report focuses on cardiac dysfunction and death during 24-Hour Holter monitoring in the setting of ischemic stroke of the 73-old-male hypertensive patient. Multi-sliced computed tomography of the brain showed hyperdensity of the middle cerebral artery (MCA) of the right side and hypodensity of the irrigation of the right MCA of the right hemisphere of the brain. The patient has been checked by cardiologist two days before the death. He was in sinus rhythm, without signs of myocardial ischemia, treated with antiedematous therapy by neurologist. Because of the ischemic brain changes in the right MCA, thrombolytic therapy could not be used. Low molecular weight heparin and parenteral antihypertensive therapy has been used and rehydration of the patient. During the continuous 24-Hour Holter monitoring during 21.54 h (until the moment of death) registered 89 364 cardiac cycles. It was sinus rhythm since 8 o'clock until 8.47 pm when one short period of atrial fibrillation appeared. After reaching the sinus rhythm again, appeared salvos of ventricular extrasystoles (VES) (up to 4 VES). Finally, there was appearance of the new right bundle branch block (RBBB), which was followed by slow ventricular tachycardia which ended in bradyarrhythmia, asystole and death. Death came during the 24-Hour Holter monitoring due to the grave ischemic acute insult of the right cerebral hemisphere.

This case report proves that patients with the right stroke have different arrhythmic disturbances due to the cerebral ischemia. The risk of cardiac complications increases proportionally to the severity of ischemic stroke and neurologic deficit. Approximately 67% of acute ischemic stroke patients have ECG abnormalities of ischemic, and arrhythmic in the first 24 hour after stroke. Cardiac arrhythmias are common reasons for death after acute ischemic stroke. Sympathetic hyperactivity and decrease in parasympathetic activity caused by stroke may be the reason of arrhythmia and sudden death. At the patients with the terminal no cardiac disease final cause of the death was confirmed to be bradyarrhythmia in 87% of the patients and ventricular tachyarrhythmia in 17%. Agonal ST-segment elevation was observed like in our case. Death was due to the bradyarrhythmia. Incidence of sudden death during acute stroke ranging from 2% to 6%.¹⁻³

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LITERATURE |||||

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