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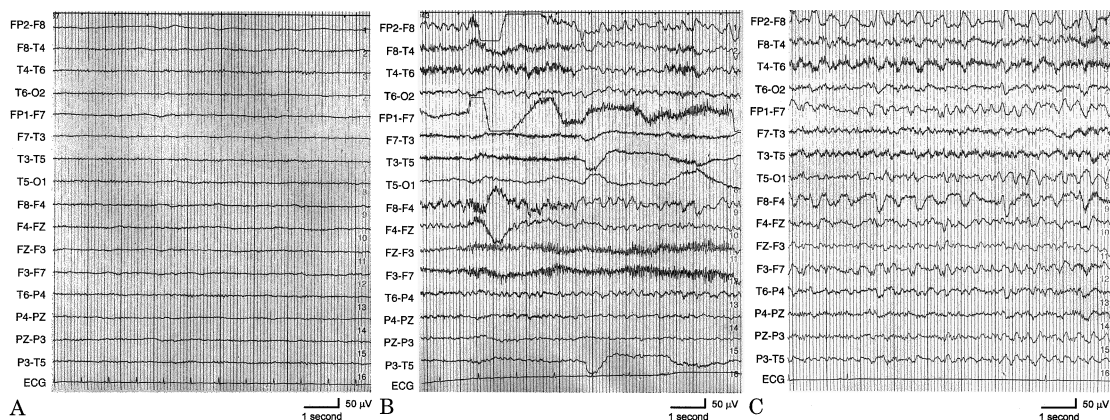


Figure. (A) Normal EEG and ECG at beginning of registration. (B) Rhythmic activity of about 3/second in the right frontotemporal region accompanied by slight reduction of heart rate. (C) Spread of rhythmic activity to the left hemisphere; ECG shows asystole for 5 seconds.

Cardiac arrest during partial seizure

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A 69-year-old man was admitted to the hospital after a brief confusional state following awakening, during which he fell. He had a history of mitral valve replacement 17 months earlier. On admission, he was alert and oriented, and neurologic findings were normal.

Results of EEG initially were normal and the ECG showed a sinus rhythm at 70 beats per minute (bpm) and a P-R interval of 0.13 seconds (figure, A). After a few minutes, theta waves appeared over the right frontotemporal region and became rhythmic, the heart rate fell to 52 bpm, and the P-R interval increased to 0.16 seconds (figure, B). Thirty seconds later, the rhythmic EEG activity spread contralaterally, the heart rate fell to 36 bpm, and the P-R

interval increased to 0.23 seconds, followed by asystole for 5 seconds (figure, C). At that time, the patient opened his eyes and smiled, but was unresponsive. Electric seizure activity stopped after 10 seconds. After 7 more seconds, the heart rate was 55 bpm, and a few minutes later, EEG and ECG had returned to normal. The patient was slightly disoriented immediately after the event but later on that day his mental status returned to normal.

Cardiac asystole induced by a complex partial seizure is a possible cause of sudden death in epilepsy, and primary cardiac arrhythmia causing syncope or presyncope is a likely misdiagnosis if cardiac monitoring is done without EEG.^{1,2}

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