The Impact of the Big East Japan Pacific Earthquake on the Occurrence and Frequency of Arrhythmia

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It is well known that disasters have great impact on the onset and frequency of arrhythmia in the patients with heart disease. On March 11 we experienced the unexpected huge earthquake and tsunami waves. Moreover, the following Fukushima nuclear power plant accident caused severe anxiety to radiation exposure. These tremendous disasters caused strong mental as well as physical stress on the people living in not only the disaster area but also surrounding districts including Tokyo. To evaluate the impact of these disasters on the cardiovascular events, we compared arrhythmic events in the patients with pacemaker or ICD implanted in the University of Tokyo Hospital. Most of the patients had little events before and also after the earthquake, resulting in no significant difference. However, when we focused on the patients who had experienced relatively frequent arrhythmia before the earthquake, tachyarrhythmia events and AF burden were increased after the earthquake in the subset of our study population. Therefore, the strong stress has serious impact on arrhythmic events, which can at least partially contribute to the increase of major cardiovascular events.

Keywords: disaster, pacemaker, arrhythmia