Assessment of Outpatients’ Waiting Time and the Intervals to Find out Arrhythmic Events or Abnormal Device Performance Using Remote Home Monitoring System

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Background: Clinical benefits of remote home monitoring system (HM) have not been fully evaluated in Japan. To investigate whether outpatients’ waiting time is shortened and HM can detect arrhythmic event or abnormal device performance (EVENTS) earlier. Method and Results: Patients with pacemaker, ICD or CRT-D were assigned to HM group or non HM group. We compared the outpatients’ waiting time (the interval from the reservation time to medical examination start time), and the interval from the onset of the EVENTS to notice them by physician between the HM and non HM groups. A total of 412 patients (51 in HM, 361 in non HM) were enrolled. Outpatients’ waiting time was 24±22 minutes in HM, and 36±22 minutes in non HM (P=0.0005). The EVENTS were observed in 38 and 256 patients in HM and non HM, respectively. Average time from the onset of the EVENTS to notice them by physician was 15±27 days in HM and 26±32 days in non HM (P=0.03). Conclusions: Using HM, the outpatients’ waiting time and the interval from the onset of the EVENTS to notice them can be significantly shortened. Clinical benefits of HM were evident in our institution in Japan.

Keywords: remote monitoring, home monitoring, outpatients’ waiting time