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THE SIGNIFICANCE OF FOLLOWING UP AFTER RADIOFREQUENCY ABLATION FOR ATRIAL FIBRILLATION USING TRANSTELEPHONIC ECG MONITORING SYSTEM

Wang Yinman, Tian Xiaochen, Xia Yunlong, Li Yan, Gao Lianjun, Zhang Shulong, Yang Yanzong *First Affiliated Hospital of Dalian Medical University*

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Objective The aim of the study was to investigate the clinical values of transtelephonic ECG (TTECG) monitoring system for heart arrhythmias diagnosis after radiofrequency ablation (RFCA) for atrial fibrillation (AF).

Methods 72 patients including 39 persistent AF (PeAF) and 33 paroxysmal AF (PAF) patients received RFCA during 2009.10–2010.4. All patients received 24 h Holter on the first day after ablation and also every 3 months during following up meanwhile TTECG was taken at any time no matter patients have symptoms or not after ablation. Compared with the TTECG, 24 h Holter recorded episodes of atrial arrhythmias. Analysis

of the relationship between AF and symptoms was carried out.

Results 4896 ECGs were received by TTECGs in total, with 68 ECGs recorded per patient. 3610 ECGs were sinus rhythm (81.99%), among which 1351 (37.43%) cases had symptoms. Among 793 abnormal ECGs, 214 abnormal ECGs were recorded without any symptoms (26.99%). At the end of 3 months of blanking period, 17 (23.61%) patients with AF recurrence were recorded by 24 h Holter, including 11 PeAF and 6 paroxysmal AF whereas 31 (43.06%) patients were recorded by TTECG monitoring including 20 PeAF and 11 PAF, there is significant difference between these two methods ($p=0.004$). After (11 ± 2.3) months following up, 9 patients with AF recurrence recorded by 24 h holter including 6 PeAF and 3 PAF while 18 (25.00%) patients were recorded by TTECG, including 11 PeAF and 7 PAF ($p=0.033$). Compared to the blanking period, recurrence rate after 1 year following up decreased significantly through TTECG monitoring ($p=0.022$), but no significant decrease by Holter monitoring ($p=0.083$). Comparing Holter and TTECG monitoring, the successful rate for PeAF were 84.62%, 71.79% respectively ($p=0.000$), the successful rate for PAF ablation was 90.91%, 78.79% ($p=0.006$).

Conclusions The results indicate the advantage of TTECG monitoring system in the following-up of patients after AF ablation, the effective monitoring method can detect asymptomatic AF after RFCA. While for patients who has symptoms of AF recurrence, but was sinus rhythm actually.