

# Analysis of Clinical Effect of Treating Arrhythmia with Stable Heart Granules

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**ABSTRACT Objective:** To study the clinical effect on the treatment of cardiac arrhythmia, and further guide the clinical treatment. **Method:** From January 2011 to January 2013, 100 patients with arrhythmia were randomly divided into observation group and control group with 50 cases in each group. Observation group patients given oral Stable heart granule treatment, while control group was treated with oral propafenone treatment. The therapeutic effect and adverse reactions of the two groups were observed and compared. **Results:** The total effective rate of the observation group was higher than control group and incidence of adverse reactions was lower than control group, the difference was statistically significant,  $p < 0.05$ . The use of stable heart particles in the treatment of arrhythmia produce significant effect. **Conclusion:** Clinical effect for Stable heart granule on arrhythmia was significant and should widely entrenched in clinical practice.

## KEYWORDS

Stable heart granules  
Cardiac arrhythmia  
Clinical effect

## 1. Introduction

Arrhythmia is a common disease in Department of Internal Medicine It is a typical clinical manifestation of many cardiovascular diseases. It has a certain incidence rate in patients with coronary heart disease, myocarditis, cardiomyopathy and normal healthy population. The clinical manifestations are diverse, mainly for the heart palpitations or low blood volume caused dizziness, syncope and even death [1]. It is a serious cardiovascular disease, which has a serious impact on public health and quality of life. In order to explore the clinical effect of the treatment of cardiac arrhythmia, 100 cases of arrhythmia in our hospital were studied, and the clinical effect of two kinds of treatment methods for the treatment of arrhythmia were compared.

## 2. Materials and methods

### 2.1. General information

Between January 2011 January to 2013, 100 patients of arrhythmia was selected. All admission patients showed the

manifestations of chest tightness, shortness of breath, fatigue and heart palpitations. All patients were diagnosed as arrhythmias according to the ECG findings and Holetar standard diagnosis. In this group of patients, 48 cases were male and 52 were female, aged 32–80 years old, with average age of 56 years old. Subjects was experienced arrhythmia for the duration 3 days to 10 years, including 30 cases, 10 cases of atrial fibrillation, 13 cases of atrial fibrillation, 12 cases of pulmonary heart disease, 20 cases of pulmonary heart disease, 6 cases of valvulopathy, 14 cases of myocarditis, 6 cases of dilated cardiomyopathy, 4 cases of hyperthyroid heart disease. According to the principle of random grouping, 100 patients were divided into observation group and control group, 50 cases in each group, two groups of patients in gender, age and condition of the difference was not statistically significant  $p > 0.05$ , comparable.

### 2.2. Method

In the control group, 50 patients were treated with 150 mg propafenone, 3 times per day, and the observation group was treated with stable heart granules, 1 sachet per time and 3 times a day. The two groups were treated with 3 weeks as a course of treatment, the clinical symptoms improvement, ECG test results and adverse reactions were observed and compared.

### 2.3. Curative effect standard

In accordance with the administration of traditional Chinese medicine disease diagnosis standard of arrhythmia

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treatment effect of division, (1) Cure: Clinical diagnosis or disappeared completely, the ECG returned to normal and not relapse within 1 month of drug withdrawal; (2) Improved: Compared with before treatment, the clinical symptoms improved significantly, the electrocardiogram showed improved more than 50%; (3) Healed: Clinical symptom does not have clear improvement even heavier, electrocardiogram examination results compared with those before treatment did not reduce even heavier. And the total effective rate was calculated as the sum of the cure rate and the improvement rate and the rate of improvement [2]. Total effective = [(1) + (2)] / [(1) + (2) + (3)] \* 100%.

## 2.4. Statistical methods

SPSS 13.0 statistical software was used for statistical analysis, the comparison between groups was carried out by *t*, and the measurement data were ( $\bar{x} \pm s$ ). The data were tested by *p*, and the  $\chi^2$  was statistically significant.

## 3. Results

### 3.1. Comparison of treatment effect of two groups of patients

Treatment effect comparison, observation group cured 32 cases, improved 15 cases, invalid 3 cases, the total effective rate was 94%, control group of 21 cases, 17 cases improved, 11 cases ineffective, the total effective rate was 78%, the difference was significant, with statistical significance *p* < 0.05 (Table 1).

In 50 patients of observation group, there were 4 cases of adverse reactions, including 3 cases of adverse reactions, 8% cases of gastrointestinal reaction, 1 cases of adverse reactions, adverse reactions occurred in 50 cases, including 6 cases of sinus tachycardia, 2 cases of I degree atrioventricular block, 2 cases of P-R interval, adverse reaction rate was 20%. The incidence of adverse reactions in the two groups

were significantly different, compared with the statistical significance *p* < 0.05.

### 3.2. Dynamic ECG changes in 24 h

Before and after treatment in both groups of patients with 24 h dynamic electrocardiogram changes were observed. Before treatment, ischemia times for observation group were (28 ± 7) times/24 h, ventricular premature beat (2081 ± 790) times/24 h, atrial premature beat (1234 ± 268) times/24 h less than; while after treatment patients' ischemia times (8 ± 6) times/24 h, ventricular premature beat (864 ± 261) times/24 h, atrial premature beat (420 ± 310) times/24 h. Whereas before ischemia time for the treatment patients in control group were (29 ± 7) times/24 h, ventricular premature beat (2102 ± 710) times/24 h, atrial premature beat (1200 ± 280) times/24 h; while after treatment number of patients' ischemia (15 ± 9) times/24 h and ventricular premature beat (1560 ± 385) times/24 h, atrial premature beat (898 ± 420) times/24 h. There was no significant difference between 24 h dynamic electrocardiogram changes of two groups and (*p* > 0.05), and the difference of 24 h in the observation group and the control group was, (*p* < 0.05) which was statistically significant different. Specific results are shown in table 2.

## 4. Discussion

Arrhythmia refers cardiac impulse and impulse conduction disturbance the affect the normal rhythm of heart beating which caused by various reasons. The main clinical manifestations include, flustered, palpitations, insomnia, chest pain, shortness of breath and fatigue. Besides it is a serious cause of sudden death in patients and the pathogenesis rate in China was about 0.9%, and it became the important reason that resulting in the death of the elderly patients with cardiovascular diseases. The common causes include: cardiomyopathy, coronary heart disease, pulmonary heart

**Table 1.** The effect of the observation group and the control group [n (%)].

Group	Cases	Cure	Improved	Invalid	Total efficiency
Observation group	50	32 (64.00)	15 (30.00)	3 (0.06)	47 (94.0)
Control group	50	21 (42.00)	17 (34.00)	11 (22.00)	38 (78.0)
$\chi^2$	-	4.857487	0.123824	5.315615	5.315615
<i>p</i>	-	0.027526	0.668108	0.021135	0.021135

**Table 2.** Dynamic electrocardiogram changes before and after treatment in the two groups ( $\bar{x} \pm s$ , 24 h).

Group	Cases	Before treatment			After treatment		
		Ischemia times	Ventricular premature beat	Atrial premature beat	Ischemia times	Ventricular premature beat	Atrial premature beat
Observation group	50	28 ± 7	2081 ± 790	1234 ± 268	8 ± 6	864 ± 261	420 ± 310
Control group	50	29 ± 7	2102 ± 710	1200 ± 280	15 ± 9	1560 ± 385	898 ± 420
<i>t</i>	-	1.236545	1.654870	2.698750	11.236548	12.986541	13.789562
<i>p</i>	-	1.232352	0.986543	1.569874	0.004562	0.003985	0.000011

disease, and other organic heart disease, electrolyte and acid-base balance disorders, autonomic nervous function disorders, endocrine disorders, etc. Moreover, some factor included, frequent number of smoking, drinking, concentrated coffee or tea, over exertion and mental stress and other [3]. Under normal circumstances, impulse of heart from the sinoatrial node, followed by atrial, atrioventricular node and atrioventricular bundle conduction to the ventricle muscle, causing cardiac rhythmic contraction. In the course of drug or pathological condition, impulse is affected in the formation or transmission of the disease, which leads to the occurrence of arrhythmia. The common types include the tachycardia, sinus tachycardia, premature beat, ventricular tachycardia, atrial or ventricular fibrillation. During the course of anti-arrhythmia drugs for arrhythmia treatment, the improper use of drugs, will lead to further increase in cardiac arrhythmia, or drugs although reduce the incidence of arrhythmia, but increased the rate of arrhythmia, that bring threatening to health and life. Therefore, the current focus should put on the treatment of arrhythmia that effective inhibition of arrhythmia, with less adverse reactions, and no increase in mortality.

According to the theory of traditional Chinese medicine (TCM), arrhythmia belongs to palpitations, pathological mechanism usually is the deficiency in origin and excess in superficiality, intermingled deficiency and excess, clinical manifestations of blockage of cardiovascular and deficiency of both vital and Yin. Stable heart granule is a new traditional Chinese medicine, its main ingredient is sealwort, Codonopsis pilisula, spikenard, pseudo-ginseng, lamber etc. Within the prescription, sealwort responsible for supplementing vital and nourishing Yin, the effect of nourish the kidney and strengthen the essence; Codonopsis pilisula strengthening spleen and tonifying lung, invigorating spleen-stomach and replenishing vital; spikenard play the role of promoting blood circulation to remove blood stasis; lamber have the effect of calming, benefit internal organs, and elimination extravasated blood. A variety of drug combination to supplementing vital and nourishing Yin, promoting blood circulation to remove blood stasis, and calming effect [4]. Modern pharmacological research show that valerian ketone is the main component of spikenard, that act on sodium channels, potassium chan-

nels and L-type calcium channel has significant block effect, can effectively prolong the action potential duration, improve arrhythmia condition; sealwort, Codonopsis pilisula and pseudo-ginseng can dilate coronary artery, increase coronary blood flow, inhibit platelet aggregation, reduce blood viscosity and catecholamine excitement, thereby reducing heart rate and myocardial oxygen consumption, strengthens the heart, improve microcirculation, blood pressure adjustment effect, and restoring normal rhythm [5].

In this group, 50 patients in the observation group were treated with stable heart granules. The total effective rate was 94%, the control group was treated with propafenone, the total effective rate was 78%, the difference of the two groups was statistically significant. The results showed that the effect of the Stable heart granule treatment of cardiac arrhythmia was more obvious than propafenone treatment and the incidence of adverse reactions was low. The effect was safe and reliable.

## References

1. Li YX. Clinical efficacy of the treatment of coronary heart disease and cardiac arrhythmia by the step size stable heart granules. *Journal of Traditional Chinese Medicine*. 2012;4(5):15–17.
2. Huang W, Yan XL. Steady heart pellet granule in the treatment of myocardial infarction clinical observation of rapid arrhythmia. *Chinese Medical Journal*. 2012;7(5):47–50.
3. Liu YW, Guo JH, Zhang P, et al. Steady heart pellet spikenard extract on rat ventricular myocytes sodium current and transient outward potassium current activated dynamics. *Journal of Chinese Cardiac Pacing and Electrophysiology*. 2009;23(6):533–535.
4. Wang Y, Lv GR. The clinical effect of the treatment of chronic pulmonary heart disease with frequent ventricular premature contractions in patients with chronic pulmonary heart disease. *Journal of Modern Medicine*. 2012;15(3):909–910.
5. Liu JH, Mo GH, Tang L, et al. Clinical research on the treatment of coronary heart disease in patients with coronary heart disease. *Chinese and Western Medicine Combined with Cardiovascular and Cerebrovascular Diseases*. 2010;5(10):922–923.