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Clinical Treatment of Elderly Patients with Chronic Atrial Fibrillation and Heart Failure

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ABSTRACT **Objective:** To study the clinical treatment of chronic atrial fibrillation and heart failure in elderly patients. **Method:** In our hospital, 120 patients with chronic atrial fibrillation complicated with heart failure were selected from March 2011 to March 2014 as the study subject. The clinical treatment of chronic atrial fibrillation with heart failure was discussed by comparing with the control group and the treatment group. **Results:** After 1 months of treatment, the total effective rate was 90% in the treatment group and 70% in the control group, the average recovery time of the treatment group was (4.45 + 0.88) day, and the average recovery time of the control group was (7.76 + 1.34) day. **Conclusion:** To improve cardiac function and ventricular remodeling, heart rate control, blocking neurosecretory system in the treatment for elderly patients with chronic atrial fibrillation and heart failure patients affect significantly, has very important clinical value.

KEYWORDS
Atrial fibrillation
Heart failure
Clinical treatment

1. Introduction

Heart failure (HF) is a condition in which the heart cannot pump enough blood to meet the body's need. It is also under group of pulmonary circulation and systemic congestion. The clinical manifestations of the syndrome were the lack of blood perfusion to tissue and organ of the body. Heart diseases are composed of various structural or functional of heart problems where leading to ventricular filling and injection of blood is low, as result cardiac output cannot meet the body's metabolic demands. When combined with atrial fibrillation in patients with heart failure, it can make the hemodynamic disorder worst. It is seriously affect the physical and mental health of patients, so that the mortality rate is greatly increased. In recent years, with the improvement of living standards, and the ageing of the population aggravated, the elderly patients with chronic atrial fibrillation and heart failure incidence is increasing year by year and both reinforce each other with mutual restriction [1]. Therefore, the purpose of this study is to explore the clinical treatment of chronic atrial fibrillation and heart failure in elderly patients.

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2. Materials and methods

2.1. Clinical data

A total of 120 cases of chronic atrial fibrillation and heart failure in elderly patients in our hospital were admitted from March 2011 to March 2014 and was selected as the subject of study. Generally, some symptoms experienced by patients are as multiple palpitations, shortness of breath, and increased dyspnea, cannot lie on the back, orthopnea, fatigue, dizziness and amaurosis, edema, cough, expectoration, hemoptysis, less urine, and other symptoms. From the 120 of patients with chronic atrial fibrillation and heart failure were randomly divided into control group and treatment group with 60 patients in each group. There were 33 male and 27 female, aged 60–85 (68.7 + 8.9) years old and 10 cases of cardiac function classification were graded to grade 30, grade 20 and grade IV.

2.2. Method

Control group is whose only the use of oxygen, salt diet, anti-infection and other general support for treatment and conventional drug treatment.

On the basis of the control group, treatment group was used the treatment of the original disease in order to improve blood flow dynamics and blocking the neuroendo-

crine abnormalities of the system, according to the principle of individual principle of conventional medicine. The specific drugs used were: Enalapril (manufacturer: Anhui Chinese medicine health Limited by Share Ltd; batch number: Zhunzi H20083604) 2.5–5.0 mg/times, 2 times a day, after gradually increasing the dose of digoxin; (manufacturer: Shanghai Xinyi Pharmaceutical Co. Ltd; batch number: Zhunzi H31020678) 0.25mg/ times, 1 times, daily except contraindications; diuretic furosemide (manufacturer: Datong Liqun Pharmaceutical Co. Ltd.; batch number: Zhunzi H14020358), orally, 20 mg/times, 2–4 times daily; spironolactone (manufacturer: Jiangsu Zhengda Fenghai Pharmaceutical Co. Ltd; batch number: H32020077) 10–20 mg/times, 1 times a day; when patients show the improvement of symptoms of edema, metoprolol (manufacturer: Southwest Pharmaceutical Limited by Share Ltd; batch number: H20033191) 6.25–1.5 mg/times, 2 times a day. Anticoagulation treatment in the process of general oral warfarin (manufacturer: Shanghai Xinyi Pharmaceutical Co., Ltd; batch production: H31022123) is used with caution [2].

In the course of treatment, according to the patient's condition changes, the dosage of the drug dosage can be adjusted according to the condition.

2.3. Observation index

The two groups of patients with chronic heart failure, the effect of treatment, the average recovery time of heart function as the observation index for comparison.

2.4. Efficacy evaluation criteria

(1) Excellence: The clinical symptoms and signs of the patients treated with complete or basic treatment with the improvement of cardiac function to achieve or exceed 2 levels.

(2) Effective: The clinical symptoms and signs of the patients were significantly relieved, the improvement of cardiac function reached or exceeded 1, but it was not up to grade 2.

(3) Invalid: Clinical symptoms and cardiac function in patients treated with no improvement or deterioration.

2.5. Statistical processing

The data obtained in this paper were statistically processed using SPSS 15.0 software to carry on the analysis, measurement data using *t*-test, count data using Chi-Square test, when $p < 0.05$, the difference is statistically significant.

3. Results

3.1. Control effect of two groups of elderly patients

After 1 months of treatment, the treatment group of elderly patients with chronic atrial fibrillation combined with heart failure was significantly better than the control group and the difference between the two groups was statistically significant ($p < 0.05$). See Table 1.

Table 1. Comparison of the effect of the two groups after treatment [cases (%)].

Group	Condition recovery			
	Excellence	Effective	Invalid	Total effective
Control group (n = 60)	15 (25.00)	25 (41.67)	18 (30.00)	42 (70.00)
Treatment group (n = 60)	34 (56.67)	20 (33.33)	6 (10.00)	54 (90.00)
χ^2	-	-	-	7.5
p	-	-	-	< 0.05

3.2. Average recovery time of heart function

The average recovery time of the treatment group was significantly shorter than that in the control group, the difference between the two groups was obvious, $p < 0.05$, with statistical significance. See Table 2.

Table 2. Comparison of average heart function recovery time in two groups of patients.

Group	Average recovery time of heart function (d)
Control group (n = 50)	7.76 ± 1.34
Treatment group (n = 50)	4.45 ± 0.88
t	10.25
p	< 0.05

4. Conclusion

As the elderly patients with chronic atrial fibrillation and heart failure are prone to complicated by various other diseases, the treatment is difficult. So for these elderly patients, the main purpose is to improve their heart function, control heart rate, as far as possible by reverse the ventricular remodeling, improve hemodynamics, reduce mortality, and improve the quality of life. For a short duration of patients with 7 real fibrillation drug used, cardioversion effect is the best. Drug complex is the first choice for patients with stable heart function. Although the class I of antiarrhythmia drugs is effective in the treatment of atrial fibrillation, the case study showed that it can increase mortality, so it is not used for the treatment. Calcium antagonists are not suitable for the treatment of chronic heart failure with atrial fibrillation. Multiple clinical studies (RACE, CHF-STAT) show that the uses of amiodarone in maintenance of sinus rhythm are safe and effective for patient with chronic heart failure and atrial fibrillation. A new generation of class III antiarrhythmic drug dronedarone cardioversion of atrial fibrillation (AF) have a higher rate of success, but the ANDROMEDA study show that patients with chronic heart failure NYHA class II–IV of dronedaronelevel increased the rate hospitalization due to worsening of heart failure and mortality. So it is not recommended for the treatment of chronic heart failure patients with atrial fibrillation. Besides, sotalol can increase the mortality in

patients with heart failure which also should not be used for the treatment of patients with heart failure. Dofetilide although effective cardioversion of atrial fibrillation in patients with heart failure, but can increase the occurrence of torsade de pointes ventricular tachycardia (TdP) risk. It is no longer recommended the use of dofetilide for cardioversion and to maintain the sinus rhythm. Therefore, for chronic heart failure patients with atrial fibrillation and maintenance of sinus rhythm, the amiodarone is currently recommended only for patients with chronic heart failure patients with repeated episodes of paroxysmal atrial fibrillation. But it is necessary to pay attention to the monitoring of the toxic effect of amiodarone on the organs. Some non-traditional antiarrhythmic drugs through anti-inflammatory are able to improve the atrial electrical and mechanical remodeling as well as improve the heart failure of patients with atrial fibrillation and increase the sinus rhythm maintenance success rate. Meta-analysis showed enalapril, trandolapril, irbesartan, losartan can significantly improve patient's health complicated with chronic heart failure and atrial fibrillation patients. Patients who are treated with drugs and electrical cardioversion show an increase success rate, which may later treated with ACEI/ARB can reduces cardiac after load, reduce the left atrial pressure, wall pressure, improve myocardial remodeling and electrical remodeling. But in the other study, lisinopril, valsartan, and sill candesartan and showed only for neutral results, suggesting that not all ACEI/ARB have such effects. Statins can also reduce the incidence of atrial fibrillation in patients with heart failure, but the role of the law and the maintenance of sinus rhythm are not clear [3].

Chronic heart failure patients with persistent atrial fibrillation with the existence of basic heart disease and electrical remodeling, the effect of the drug is often poor after the choice of electric power is failed. The used of ablation in the atrial fibrillation treatment cannot be transferred to the sinus rhythm, but it is feasible for synchronous cardioversion. For serious symptoms like hemodynamic instability, or with atrioventricular bypass episode in patients with atrial fibrillation, early cardioversion is possible. The rate of atrial fibrillation recurrence is high so amiodarone in maintaining the rate of sinus rhythm in patients with chronic heart failure is required.

Catheter ablation has become one of the important approaches to the treatment of atrial fibrillation in patients with chronic heart failure. Multiple clinical studies have shown that catheter ablation of atrial fibrillation with impaired systolic function can significantly improve the 6 minute walking distance, left ventricular ejection fraction, improve quality of life, and may reverse ventricular remodeling. PABA-CHF is a prospective, multicenter, randomized, controlled study showed that compared to the atrioventricular node ablation and dual chamber pacing can better improve the cardiac function with heart failure in patients with atrial fibrillation catheter ablation; subgroup analysis showed that, compared with paroxysmal atrial fibrillation and non-paroxysmal atrial fibrillation patients from the pulmonary vein isolation benefit (including ejection fraction and six minutes walking time, quality of life (QOL) and left atrial diameter) more. These studies suggest that catheter ablation is safe and effective in patients with atrial fibrillation, especially left ventricular ejection fraction. Catheter ablation can significantly improve the quality of life and may reverse atrial remodeling. The treatment of tachycardia cardiomyopathy can be better than the atrioventricular junction ablation plus pacing. Since the number of samples is limited and the follow-up time is short, the long-term effects need to be further studied, and catheter ablation in the treatment of heart failure complicated with atrial fibrillation is recommended as the center of experience.

In this study, the control group was treated with conventional therapy and conventional drug therapy, and the treatment group was treated with the treatment of the primary disease, and the treatment of the nervous system. After 1 months of treatment, the total effective rate was 90% in treatment group and 70% in control group, the average recovery time of treatment group was (4.45 + 0.88) day, and the recovery time of the control group was (7.76 + 1.34) day. The effect of the treatment group was significantly higher than that of the control group.

In summary, through observation we can explain that with comparison between the two groups of patients with chronic atrial fibrillation and heart failure, patient of average heart function recovery time with treatment effect were able to improve the cardiac function and ventricular remodeling. The control of the rhythm of the heart by blocking neurosecretory system treatment for the elderly patients with chronic atrial fibrillation and heart failure patients showed a significant effect. It has very important clinical significance and is worth in clinical widely used.

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