Effect of Valsartan Combined with Hydrochlorothiazide in the Treatment of Patients with Hypertensive Heart Disease

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Abstract: Objective: To analyze the clinical effect and treatment of patients with hypertensive heart disease by using valsartan combined with hydrochlorothiazide. **Methods:** 90 patients with hypertensive heart disease treated in our hospital are selected as the research objects from January 2018 to January 2019, and are divided into two groups randomly according to the different treatment methods, namely, control group (n=45 cases) treated with valsartan alone, and experimental group (n=45cases) treated with hydrochlorothiazide on the basis of valsartan treatment. The blood pressure level and adverse reactions are compared between the two groups. **Results:** After the treatment, the systolic blood pressure and diastolic blood pressure of the experimental group are better than that of the control group, and the adverse reactions of the experimental group are less than that of control group ($p<0.05$). **Conclusion:** Valsartan combined with hydrochlorothiazide can be used to treat patients with hypertensive heart disease, and it can control the occurrence of adverse reactions.

Hypertensive heart disease is a serious cardiovascular disease in clinic. The symptom of disease is usually firstly reflected as hypertension, which then will cause heart disease. With the improvement of living standards, people's dietary habits have also changed, and the number of patients with hypertensive heart disease in China has been increased. At present, hypertensive heart disease has become a major disease that seriously endangers people's health. Hypertensive heart disease will develop to a certain period of time, such as cough, asthma, and heart failure [1]. Pulmonary edema will also appear in serious cases, which needs to take timely measures to prevent the disease from worsening and threatening the lives of patients. Valsartan is a kind of cardiovascular drugs commonly used in medicine, which can block the release of angiotensin. In recent years, research and analysis suggest that the combination of valsartan and hydrochlorothiazide can improve the efficacy. The actual analysis of this study is carried out, and the details are as follows.

1. Materials and methods

1.1 General information

90 patients with hypertensive heart disease treated in our hospital are selected as the research objects from January 2018 to January 2019, and are divided into two groups randomly according to the different treatment methods, namely, control group (n=45 cases) treated with valsartan alone, and experimental group (n=45cases) treated with hydrochlorothiazide on the basis of valsartan treatment. In the control group, 28 cases are male and 17 cases are female. The minimum age is 43 years old and the maximum age is 75 years old. The average age is (57.9 ± 5.2). There are 25 males and 20 females in the experimental group. The minimum age is 42 years old and the maximum age is 78 years old, with an average age of (58.2 ± 5.8). After comparison, it can be seen that there is no significant difference in the basic data between the two groups ($P < 0.05$).

Inclusion criteria: After confirmed by the "Guidelines for Cardiovascular Therapy and Prevention of Hypertension", the patients are agreed to participate in this study.

Exclusion criteria: Patients with serious diseases such as tumors, liver and kidney diseases, as

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well as having conscious obstacles and secondary hypertension, are not agreed to participate in this study.

1.2 Method

Patients with hypertensive heart disease in the control group are treated with valsartan alone. Valsartan is given orally with a dosage of 80 mg per day, which could adjust the dosage of valsartan to be twice a day with a dosage of 80 mg per time according to the patient's drug tolerance.

Patients with hypertensive heart disease in the experimental group are treated with hydrochlorothiazide on the basis of valsartan treatment, and the dosage of hydrochlorothiazide is 6.25 mg per day. The dosage of hydrochlorothiazide could be increased to be twice a day with a dosage of 6.25 mg per time appropriately according to the patient's tolerance.

Both groups are treated for up to 16 weeks.

1.3 Observation indicators [2-3]

In this study, the blood pressure levels of the two groups after treatment are observed, including diastolic and systolic blood pressure, and records the occurrence of adverse reactions in the two groups.

1.4 Statistical method

In this study, SPSS20.0 statistical software is used to analyze the data. Among them, % indicates count data and x2 test is used; x ± s indicates measurement data, and t-test is performed. Differences between groups are statistically significant when the value of p is less than 0.05.

2. Results

2.1 Comparison of blood pressure levels after treatment between the two groups

After treatment, the blood pressure levels of the two groups are measured, and the diastolic and systolic blood pressures of the experimental group are better than those of the control group ($p < 0.05$). Detailed data are shown in Table 1 below.

Table 1 Comparison of blood pressure levels after treatment between the two groups

Group	Case	Diastolic blood pressure(mmHg)	systolic blood pressure(mmHg)
Control group	45	142.35±6.40	92.38±6.08
Experimental group	45	125.30±5.18	76.59±5.57
T	-	15.607	13.783
p	-	0.000	0.000

2.2 Comparison of adverse reactions in the course of treatment between the two groups

There are 2 cases of nausea, 2 cases of dizziness, 1 case of dry cough, 2 cases of edema in the control group, 7 cases of adverse reactions occurred accounting for 15.56%; 1 case of nausea and 1 case of dizziness occurred in the experimental group, and 2 cases of adverse reactions occurred accounting for 4.44%. The experiment shows that the number of adverse reactions in the experimental group is less than that of the control group ($x2=11.052$, $p=0.005$).

3. Discussion

Hypertensive heart disease is very common in clinical cardiovascular disease, especially in recent years, the number of cases has increased rapidly. Relevant information shows that the occurrence of hypertensive heart disease is closely related with the diet structure and living habits of people, which will bring more heavy pressure on the patient's body and family. When hypertensive heart disease develops to a certain extent, there will be kidney failure and heart failure [4]. It is also prone to stroke, which threatens the safety of patients. Therefore, the clinic attaches

great importance to the treatment of such patients and continuously strengthens clinical research.

The aim of the treatment of hypertensive heart disease is to control the blood pressure level in a reasonable range to stabilize the body's cardiac function, alleviate its clinical symptoms and control the development of the disease. Patients with hypertensive heart disease are usually in a state of long-term hypertension, and their heart function will be impaired to some extent. Therefore, cardiovascular need to be taken into account in the treatment of hypertensive heart disease. At present, the disease is usually treated with drugs, which can restore patients' blood pressure to normal level in a short period of time when the effect of antihypertensive drugs is ideal. Valsartan is often used in clinical treatment of cardiovascular diseases. It is a class of angiotensin receptor antagonist, which can block the angiotensin receptor in the body [5]. It can alleviate the external vascular resistance of patients, inhibit the reflex gratitude activity of the body, and promote the excretion of water and sodium in patients. In addition, it can reduce the secretion of aldosterone in the body and effectively control the blood pressure. Moreover, the drug has a long-lasting effect and is an ideal cardiovascular drug. However, for some patients, valsartan alone can not achieve good therapeutic effect. The pathogenesis of hypertension and heart disease is diversified. It may be difficult to achieve therapeutic effect by antihypertensive drugs alone. In recent years, clinical studies have gradually analyzed the combined treatment of valsartan, and found that it has significant therapeutic effect by the treatment of combination of hydrochlorothiazide and valsartan. Hydrochlorothiazide is a kind of diuretic, whose efficacy lies in excreting sodium and diuresis and controlling blood volume, and it has good antihypertensive effect. At the same time, hydrochlorothiazide has certain therapeutic effect on cardiac function. Hydrochlorothiazide alone can cause adverse reactions, mainly because it can activate renin and angiotensin in the course of its application [6]. However, the combination of hydrochlorothiazide and valsartan can play a synergistic role. It can reduce the activity of angiotensin and the occurrence of adverse reactions at the same time, it can also protect the main organs of patients, and will not be harmful to the normal heart rate of the patients. It has an effect on improving the heart function and controlling the bradykinin level in a reasonable level. The combination of valsartan and hydrochlorothiazide has a greater advantage in the treatment of hypertensive heart disease, which can effectively promote the therapeutic effect and has a higher clinical significance.

This study is aimed at patients with hypertensive heart disease in our hospital. It has significant effect with the treatment of combination of valsartan combined with hydrochlorothiazide. It is beneficial to improve the blood pressure level of patients, and pay close attention to patient tolerance and vital signs in combination therapy to ensure that no excessive adverse reactions will occur, and the safety of patients will be guaranteed, which will help to improve the treatment effect of patients. This method can be used for clinical promotion.

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