



Clinical Effect of Atorvastatin Calcium Tablets Combined with Cardiovascular Drugs in the Treatment of Coronary Heart Disease

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Abstract

Objective: To analyze the clinical effect of atorvastatin calcium tablets combined with cardiovascular drugs in the treatment of coronary heart disease. **Methods:** The study lasted from March 2021 to March 2022. The subjects of the study were 60 patients with coronary heart disease treated in our hospital during this period. They were divided into two groups according to different treatment methods. The study group was treated with atorvastatin calcium tablets combined with cardiovascular drugs, and the control group was treated with cardiovascular drugs. The clinical efficacy of the two groups was compared. **Results:** The incidence of adverse reactions in the study group was lower than that in the control group ($P < 0.05$); There was significant difference in cardiac function and structure indexes ($P < 0.05$); In the comparison of blood lipid indexes between the two groups, the scores of various indexes in the study group were lower than those in the control group after treatment, $P < 0.05$. Compared with the treatment effect, the treatment efficiency of the study group was higher than that of the control group ($P < 0.05$). **Conclusion:** The clinical effect of atorvastatin calcium tablets combined with cardiovascular drugs in the treatment of coronary heart disease is significant, and the safety is also very high after treatment, which will improve the cardiac function and blood lipids of patients.

Keywords

Atorvastatin calcium tablets; Cardiovascular drugs; Coronary heart disease; Clinical effect

Coronary heart disease is a common disease in clinical practice. It belongs to cardiovascular disease and is more common in the middle-aged and elderly population [1]. With the aggravation of aging, the incidence of coronary heart disease has also risen sharply. More and more middle-aged and elderly people are troubled by coronary heart disease, which directly affects their normal life [2]. The occurrence of coronary heart disease is mainly due to abnormalities in the structure of the human coronary arteries. If patients fail to receive timely treatment, it is easy to aggravate the condition and easily lead to heart failure, arrhythmia and other phenomena, threatening the patient's life safety [3]. Coronary heart disease is generally caused by hyperlipidemia. Therefore, during treatment, patients should use cardiovascular drugs and certain lipid-lowering drugs. Commonly used drugs include atorvastatin calcium tablets, which not only improve the patient's blood lipid level, but also play a good disease control effect when used together with cardiovascular drugs [4].

1. Materials and methods

1.1 General information

The starting time of this study was from March 2021 to March 2022. During this period, 60 patients with coronary heart disease admitted to our hospital were the subjects of the study. Afterwards, all patients were divided into two parts according to different treatment methods, one for the study group and the other for the control group. The number of people in the two groups was the same, both 30 cases. There were 14 female patients and 16 male patients in the study group, and 15 female patients and 15 male patients in the control group. The age of the patients in the study group was between 40 and 78 years old, with an average age of (70.25 ± 8.25) years old. The age of the patients in the control group was between 41 and 79 years old, with an average age of (70.32 ± 8.21) years old. By completing the comparison of the general data of the two groups, it was found that the P value was greater than 0.05, which was worth comparing.

1.2 Inclusion and exclusion criteria

(1) Inclusion criteria

The included patients were all diagnosed with coronary heart disease. The patients who joined the study had signed the corresponding consent form at the beginning of the study.

(2) Exclusion criteria

Patients were excluded from the study if they had mental illness; patients were excluded from the study if they had language communication disorders.

1.3 Methods

Patients in the control group received cardiovascular drug treatment, using isosorbide mononitrate sustained-release tablets, which was produced by Lunan Beite Pharmaceutical Co., Ltd. and the national medicine approval number was H19991039. Patients should take the medicine orally, one tablet every morning, which should be swallowed with water and should not be crushed or chewed; they took aspirin enteric-coated tablets, produced by Bayer Healthcare Co., Ltd., with the national medicine approval number J20171021, and the method of use was oral, 100 mg at a time, taken once a day; they took compound danshen tablets, produced by Guangdong Baiyunshan Hutchison Whampoa Chinese Medicine Co., Ltd., with the national medicine approval number Z44023372, and patients should take the medicine orally, 3 tablets at a time, 3 times a day.

Patients in the study group received atorvastatin calcium tablets in addition to the cardiovascular drug treatment in the control group. The drug was produced by Lepu Pharmaceutical Technology Co., Ltd., with a national drug approval number of H20133127. It is taken orally, 20 mg at a time, once a day.

Both the study group and the control group received continuous treatment for more than 2 months.

1.4 Observation indicators and effect evaluation criteria

- (1) Comparison of adverse reactions between the two groups, including rash, indigestion, nausea, and diarrhea.
- (2) Comparison of cardiac function and structural indicators between the two groups after treatment (LADD, LVESD, LVEF).
- (3) Comparison of blood lipid indicators between the two groups, including TG, LDL-C, and TC.
- (4) The two groups were compared for the effectiveness of treatment, and the results were divided into markedly effective, effective, and ineffective according to the specific effects. The evaluation criteria were as follows: markedly effective means that after two months of treatment, all clinical symptoms of the patients disappeared, their cardiac function was significantly improved, and their cardiac function grade reached grade 2 or above; effective means that after two months of treatment, their clinical symptoms were significantly improved, their cardiac function was also well improved, and their cardiac function grade reached grade 1-2; ineffective means that after two months of treatment, their clinical symptoms did not change significantly, or their condition even worsened. Total effective rate = markedly effective rate + effective rate.

1.5 Statistics and analysis

SPSS22.0 statistical software was used as the main tool for data processing to analyze and process the data. Count data were expressed as %, and measurement data were expressed as ($\bar{x} \pm s$). The chi-square test and *t*-test were used respectively. When there was a statistical difference, $P < 0.05$.

2. Results

2.1 Incidence of adverse reactions

30 patients in the study group, 1 case suffered from nausea and 1 case from indigestion after treatment. The incidence rate of adverse reactions was 6.67%. Among the 30 patients in the control group, 2 cases suffered from nausea after treatment., 2 cases of indigestion, 3 cases of rash, and 1 case of diarrhea. The incidence of adverse reactions was 26.67%. Comparing the two groups, it was found that the χ^2 value was 4.3200 and the *P* value was 0.0376. The comparison of the incidence of adverse reactions in the study group. The rate was significantly lower than that of the control group, $P < 0.05$.

2.2 Structural indicators of cardiac function

In the comparison of cardiac function structural indicators, there was a significant difference between the study group and the control group, $P < 0.05$. See Table 1 for details.

Table 1. Comparison of cardiac function and structural indicators after treatment [$\bar{x} \pm s$]

Group	Number of cases	LADD/mm	LVESD/mm	LVEF/%
Research Group	30	42.01 ± 5.57	42.67 ± 5.60	38.84 ± 6.74
Control group	30	35.01 ± 4.70	33.28 ± 4.01	48.61 ± 8.17
<i>t</i> -value		5.2608	7.4671	5.0525
<i>P</i> -value		0.0000	0.0000	0.0000

2.3 Comparison of blood lipid indicators between two groups

TC, TG, and LDL -C indices of the study group were (4.40 ± 0.81), (1.93 ± 0.82), and (4.34 ± 1.11), respectively, while those of the control group were (5.35 ± 1.25), (1.33 ± 0.60), and (3.26 ± 0.91), respectively. Comparison between the two groups showed that the *t* values were 3.4934, 3.2344, and 4.1213, respectively, and *P* values were all < 0.05 .

2.4 Comparison of treatment effectiveness between two groups

30 patients in the research group, after treatment, the number of patients with marked effects was 20, the number of effective patients was 9, and the number of ineffective patients was 1. The effective rate of treatment was 96.67%. For the 30 patients in the control group, after treatment, the number of patients with marked effects was 9, the number of patients with effective results was 12, and the number of patients with ineffectiveness was 9. The effective rate of treatment was 70%., comparing the two groups, it was found that the χ^2 value was 7.6800 and the *P* value was 0.0055. It was found that the treatment effectiveness of the research group was significantly higher than that of the control group, $P < 0.05$.

3. Discussion

Coronary heart disease is a common disease in China and also a disease with a high incidence rate. Not only is the cause of the disease extremely complex, but there are also many influencing factors, which will directly threaten the health and life safety of the patients [5]. According to relevant studies, the inducing factors of coronary heart disease are directly related to aging, obesity, dyslipidemia, and hypertension. The middle-aged and elderly are also the main patients. If this disease is not taken seriously, it will have a serious impact on the patient's prognosis when the condition is serious. Coronary heart disease is directly related to the body's blood lipid metabolism. The main pathological

basis is abnormal lipid metabolism, which reduces the elasticity of the blood vessel wall of the human body after the disease. The arterial wall is also prone to lipid deposition, resulting in the occurrence of atherosclerosis, and the patient's heart blood supply is insufficient, inducing myocardial infarction or angina pectoris, directly threatening the patient's life safety [6].

In recent years, China's economy has been growing rapidly, which has also improved the national economic level. People's eating habits and living habits have also changed accordingly. Unhealthy eating and unscientific eating time have become major problems, which has also increased the incidence of coronary heart disease [7]. In this regard, treating coronary heart disease and reducing the incidence of coronary heart disease have become the main topics of current research, and it is necessary to provide safe and effective treatment plans for patients with coronary heart disease [8]. Nowadays, common treatment methods are drug therapy and surgical treatment. Since surgical treatment has certain limitations, such as high cost, high risk, and many complications, many people will choose drug treatment methods, such as conventional cardiovascular drug treatment. However, the effect of using cardiovascular drugs alone is not ideal, and it is difficult to meet the treatment needs of all patients. In addition, patients also have more adverse reactions after taking the drugs. Therefore, it is recommended to combine cardiovascular drugs with other drugs. Clinically, it has been shown that the effect of using them together with statins is obvious. Atorvastatin calcium tablets in statins have lipid-regulating and anti-inflammatory effects, and can also improve the cholesterol and low-density lipoprotein levels of patients. In addition, atorvastatin calcium tablets can reduce the inflammatory response in the patient's body, protect the patient's cardiovascular and cerebrovascular cell function, and thus maintain the patient's heart function.

In this study, patients in the research group received atorvastatin calcium tablets combined with cardiovascular drug treatment, while patients in the control group received cardiovascular drug treatment. After two months of treatment, the two groups in terms of effects: the treatment effectiveness of the study group was significantly higher than that of the control group, $P < 0.05$; the incidence of adverse reactions after medication in the study group was significantly lower than that of the control group, $P < 0.05$; After treatment, the functional score was better than that of the control group, $P < 0.05$; in terms of comparison of blood lipid indicators between the patients in the research group and the control group, after treatment, all blood lipid indicators in the research group were lower than those in the control group, $P < 0.05$. The above results also directly indicate that the combined use of atorvastatin calcium tablets and cardiovascular drugs is significantly more effective in treating patients with coronary heart disease than the sole use of cardiovascular drugs. Therefore, combined use of drugs can be tried to treat coronary heart disease.

In summary, when treating patients with coronary heart disease, it is recommended to use atorvastatin calcium tablets in combination with cardiovascular drugs. This will not only improve the patient's cardiac function and blood lipid function, but also reduce the probability of adverse reactions after medication, and has clinical application value.

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