Clinical effect study on patients with coronary heart disease complicated with atrial fibrillation after PCI operation.

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Abstract

Objective: The study was on the clinical effect of patients with coronary heart disease complicated with atrial fibrillation after PCI operation.

Methods: 60 cases of patients with coronary heart disease complicated with atrial fibrillation treated in our hospital from March 2015 to March 2016 were chosen, who were divided into treatment group and control group with 30 cases each according to different therapeutic method. The treatment of control group was Hua Falin, and treatment group received aspirin, clopidogrel and Hua Falin for treatment. The clinical effect, incidence and recurrence rate of adverse bleeding events of the two groups were compared.

Results: The treatment effect of treatment group was better than the control group, and there was significant difference between two groups (χ²=4.32, P<0.05), which had statistical significance. The incidence of adverse bleeding events of the treatment group was lower than that of the control group, and there was significant difference between two groups (χ²=4.043, P<0.05). The rate of control group with recurrence was higher than the treatment group, and there was significant difference between two groups (χ²=4.043, P<0.05).

Conclusion: Treating the patients with coronary heart disease complicated with atrial fibrillation by aspirin and clopidogrel after PCI can improve the cure rate and reduce the incidence and recurrence rate of adverse bleeding events. It provides more forceful basis for clinical treatment and has great significance on the treatment of patients with heart disease complicated with atrial fibrillation.

Keywords: Coronary heart disease, Atrial fibrillation, PCI postoperative, Clinical effect.

Accepted on January 10, 2016

Background

Coronary heart disease is also called coronary atherosclerosis, which refers to body lipid metabolism disorder, and lipid accumulation on the arterial intima forms white plaque, causing narrow arterial lumen, poor blood flow, cardiac ischemia and even angina pectoris and so on [1]. The treatment of coronary heart disease is a worldwide problem, which has high mortality and morbidity [2]. It is an important reason for the sudden death that coronary heart disease causes ventricular arrhythmias [3]. Despite drug and PCI treatment has made great progress, there are still many problems existing [4]. Myocardial ischemia-reperfusion injury caused by PCI operation is another important reason for aggravated myocardial injury [5].
Materials and Methods

General data

60 cases of patients with coronary heart disease complicated with atrial fibrillation treated in our hospital from March 2015 to March 2016 were chosen, who were divided into treatment group and control group with 30 cases each according to different therapeutic method. Patients of 60 cases with allergic history were exclusion. The control group included 20 men and 10 women with the age range from 52 to 68 years old and an average of (56.2 ± 48.1) as well as course of disease 1.2~3.8 years and an average of (1.6 ± 4.2). The treatment group had 30 cases, among which male was 16 cases and female 14 cases, aged 53 to 66 years old with an average of (56.2 ± 45.8 years) and the course of disease (1.6~3.9) years, average1.8 ± 4.1. The difference of the two groups in age, sex and course of disease was not significant (P>0.05), which has comparability.

Treatment methods

First of all, the two groups received coronary artery angiography, and then the PCI treatment [11,12]. Control group received Warfarin treatment, with oral method, starting dose 0.5-20 mg once and 2.5-7.5 mg per day. Adult dosage is 10 mg, QD for successive3 days (a course) [13,14]. The treatment group were treated with aspirin, clopidogrel and warfarin with the dosage of oral aspirin, 50~150 mg once, once a day, oralclopidogrel 75 mg/D before meals, once per 2~3 days and the same dosage of warfarin with those of the control group [15,16]. Medication was used in both preoperative and postoperative periods.

Observation indexes

Comparing the treatment effect, incidence and recurrence rate of adverse bleeding events of the two groups, the efficacy was divided into recovery referring to no clinical symptoms and each indexnormal; effectivity meant a fundamental turn for the better with no significant clinical symptoms; Invalidation showed no improvement and even heavier situation. Adverse bleeding events was composed by cerebral hemorrhage, hemorrhage of digestive tract, skin and mucous membrane hemorrhage [17,18].

Table 1. The treatment effect of the two groups [n (%)].

<table>
<thead>
<tr>
<th>Groups</th>
<th>Treatment group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Cure</td>
<td>24 (80.00)</td>
<td>16 (53.33)</td>
</tr>
<tr>
<td>Effectivity</td>
<td>4 (13.33)</td>
<td>6 (20.00)</td>
</tr>
<tr>
<td>Invalid</td>
<td>2 (0.60)</td>
<td>8 (26.70)</td>
</tr>
<tr>
<td>Total effective rate</td>
<td>28 (93.33)</td>
<td>22 (73.40)</td>
</tr>
</tbody>
</table>

Statistical methods

Applying SPSS11.0 software for data analysis and processing of the two groups, P<0.05 meant that there were statistically significant differences between the results of data. Therapeutic effect, incidence and recurrence rate of adverse bleeding events in result indexes were measurement data which were tested by $\chi^2$ [19,20].

Results

Comparing the treatment effect of the two groups

In the control group, 16 cases were cured in which 6 cases were effective, 8 ineffective and the cure rate was 53.33%, the total effective rate was 73.4%. The treatment group had 24 cured cases, of which 4 cases were effective, 2 ineffective and the cure rate was 80%, the total effective rate was 93.33%, which was as shown in Table 1. The treatment effect of treatment group was better than the control group, and there was significant difference between two groups ($\chi^2=4.32$, P<0.05), which had statistical significance.

Comparing the incidence of adverse bleeding events between the two groups

The incidence of adverse bleeding events of the treatment group was lower than that of the control group, and there was significant difference between two groups ($\chi^2=4.043$, P<0.05), which had statistical significance as shown in Table 2.

Table 2. Comparasion of the incidence of adverse bleeding events between the two groups.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Treatment group (n=30)</th>
<th>Control group (n=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebra hemorrhage</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Digestive tract hemorrhage</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Skin and mucous membrane hemorrhage</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Incidence of adverse bleeding events (%)</td>
<td>3.34</td>
<td>20</td>
</tr>
</tbody>
</table>

Comparing the recurrence rate between the two groups

Recurrence of the control group accounted for 20% and the treatment group 3.34%. The rate of control group with recurrence was higher than the treatment group, and there was significant difference between two groups ($\chi^2=4.043$, P<0.05), which had statistical significance as shown in Table 3.

Table 3. Comparasion of the recurrence rate between the two groups.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Cases</th>
<th>Recurrence (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
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Biomed Res- India 2017 Special Issue

Yuan/Su/Xie/Zhang/Wang/Liu/Li

Special Section: Health Science and Bio Convergence Technology
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<table>
<thead>
<tr>
<th>Treatment group</th>
<th>30</th>
<th>1</th>
<th>3.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>30</td>
<td>6</td>
<td>20</td>
</tr>
</tbody>
</table>

Discussion

In recent years, with the developing level of economic development and people's life, the incidence rate of coronary heart disease is higher and higher [21]. At present, coronary heart disease is located at the first place in developed countries. In addition, incidence and mortality of China's population with coronary heart disease is increasing year by year, and the disease groups have become younger and younger. At the same time, the gap between urban population and rural population is getting smaller and smaller [22]. The reason why the incidence is higher includes many ones, such as patients with high blood pressure, high cholesterol, diabetes and obesity, etc.; unhealthy lifestyle, long-term smoking, drinking, lack of exercise, etc.; long time depression or anxiety; family genetic history.

Warfarin is a kind of coumarin anticoagulants against the role of vitamin K, which can well inhibit synthesis of vitamin K in liver and coagulation factors such as II, VII, IX, X instead of any resistance to the factors. It works by consumption of the coagulation factor with activity in body, and the efficacy lasts long time, which can effectively prevent the formation and development of thrombosis, prevention and treatment of thromboembolic disease, reduce the incidence and mortality rate of pulmonary embolism to the maximum extent, reduce the degree of high risk of surgery in surgical department, better treat rheumatic heart disease, hip fixation, artificial heart valve replacement surgery disease [23-25]. Warfarin can assist the treatment of myocardial with the infarction. If it participates in aspirin and clopidogrel combined therapy, the therapeutic effect can be improved [26,27] to achieve the maximum utilization of drugs.

In this study, the cure rate of the treatment group was 80% and total effectivity 93.33%. Comparing the two groups, the difference was statistically significant (P<0.05); the incidence of adverse bleeding events was 3.34%. And compared with the control group, the difference was statistically significant (P<0.05); recurrence rate was 3.34%, which had statistically significant differences from the control group (P<0.05).

In summary, if patients with coronary heart disease complicated with atrial fibrillation take aspirin and clopidogrel after PCI as treatment, it can improve their cure rate, reduce the incidence and recurrence rate of the adverse bleeding events, provide more effective basis for clinical treatment as well as have great significance on treatment for patients with coronary heart disease complicated with atrial fibrillation. Therefore, it should be widely applied in clinic.

Reference


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