Discussion on the Effect and Clinical Availability of Rational Drug Treatment for Hypertensive Patients in Primary Hospitals

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Abstract:Objective: To explore the effectiveness and clinical availability of rational drug treatment for hypertensive patients in primary hospitals. Methods: The 90 selected patients were all treated with selected medication in our hospital from August 2021 to August 2022. Following the randomized principle, the enrolled patients were divided into a control group (treated with enalapril maleate folic acid tablets, 45 cases) and an observation group (treated with nifedipine controlled release tablets, 45 cases). Analyze the clinical effect and complications after treatment and compare them between groups; The blood pressure changes before and after treatment were analyzed and compared between groups. Results: Compared with 75.56% of the clinical efficacy in the control group, 95.56% in the observation group was higher (P<0.05); Before treatment, there was no significant difference in blood pressure levels among different groups of patients (P>0.05). Compared with before treatment, diastolic and systolic blood pressure showed a significant downward trend after treatment, and the decrease was more significant in the observation group (P<0.05); The incidence of adverse reactions in the control group was 6.66%, while the incidence of complications in the observation group was 11.11% (P>0.05). Conclusion: Rational drug treatment for hypertensive patients in primary hospitals has a good effect, can stabilize their blood pressure within the normal range, and combined medication will not increase adverse drug reactions. The safety is worth affirming.

Keywords: Hypertension; Grassroots Hospitals; Reasonable Drugs; Therapeutic Effect; Usability

Hypertension is a chronic disease, with age, obesity, and other risk factors. Hypertension can lead to the occurrence of cardiovascular and cerebrovascular diseases. The occurrence of stroke and myocardial infarction has a certain correlation with hypertension in a large part. The process of urban-rural integration in China is accelerating, and the living standards in rural areas have also been significantly improved. The probability of rural residents suffering from hypertension is increasing, posing a serious threat to people's physical health and life safety. In clinical practice, hypotensive treatment for patients can effectively reduce the incidence of stroke and myocardial infarction, which is of great significance for ensuring the safety of patients' lives.[1] The country has increasingly attached importance to the management of chronic diseases, and has continuously increased education in the management of chronic diseases at the grassroots level. The rational use of hypertension drugs in grassroots hospitals is of great significance to patients. In order to further explore the effectiveness and clinical availability of rational drug treatment for hypertension patients in primary hospitals, this study specifically included 90 patients who selected drug treatment methods in primary hospitals from August 2021 to August 2022 as the study subjects. The results are summarized as follows.[2]

1. Data and Methods

1.1. General information

The 90 selected patients were all treated with medication in our hospital from August 2021 to August 2022. Following the randomization principle, the enrolled patients were divided into a control group and an observation group, with 45 patients in each group. The ratio between males and females in the control group was 25/20; The duration of illness ranged from 1 to 6 years, with an average of 2.87 ± 1.48 years; The average age ranged from 39 to 73 years, with an average of 54.98 ± 3.77 years. The ratio between male and female in the observation group was 24/21; The duration of illness ranged from 1 to 5 years, with an average of 2.91 ± 1.67 years; The average age ranged from 39 to 72 years, with an average of 5.02 ± 3.81 years. There is no difference in general data between different groups of

patients (P>0.05), indicating that there is no statistical difference in their data, and further comparison and analysis between groups can be conducted. The study has been approved by the hospital's Medical Ethics Committee and meets the specific requirements of the Medical Ethics Committee. Researchers will explain in detail the implementation process and process of the entire project, and also need to indicate to the patient's family the safety of participating in the study. After obtaining the consent of the patient's family, they will be invited to sign an informed consent form. Inclusion criteria: Patients were diagnosed as hypertension by examination;*[1]* The clinical data of the patient is complete;[3] High compliance with research and ability to cooperate with researchers in conducting research. Exclusion criteria: concomitant with other diseases that seriously threaten life and health, such as malignant tumors, uremia, etc; Hypersensitivity reactions to the drugs used in this study; Patients with mental disorders.*[2]*

1.2. Method

The patients in the control group were treated with enalapril maleate folic acid tablets (GYZZ H20103783), 10 mg/time orally, once a day. The patients in the observation group were treated with nifedipine controlled release tablets (GYZZ J20040031) on the basis of the control group, using 30 mg orally once a day. Both groups of patients were treated for 6 months.

1.3. Observations

(1) The clinical effects after treatment were analyzed and compared between groups. Among them, significant effect: After treatment, the patient's blood pressure was steadily controlled and there was no urinary protein phenomenon, and the clinical symptoms disappeared;*[3]* Effective: After treatment, the patient's blood pressure is stable but there is a small amount of urinary protein, and clinical symptoms appear to be significantly improved; Ineffective: The blood pressure appears unstable, and the patient's clinical symptoms do not improve significantly or even worsen. The clinical effective rate is determined by removing the ineffective rate. (2) While the two groups of patients were quiet, medical personnel took a blood pressure meter to measure the levels of diastolic and systolic blood pressure before and after treatment. (3) The occurrence of adverse reactions during the medication process was analyzed and compared between groups, including headache, lethargy, gastrointestinal reactions, etc.

1.4. Statistical methods

Carefully enter the collected physical examination data using Excel software to avoid omissions and entry errors. SPSS 26.0 is used to process and analyze the data. First, the normality test is performed on the measurement data, and the measurement data conforming to the normal distribution is expressed in ($x \pm s$). The percentage of categorical variables used, and the chi-square test was used for inter group comparisons. P<0.05 indicates a statistically significant difference.*[4]*

2. Results

2.1. Clinical effects

The detailed data can be seen in Table 1. Compared with 75.56% of the clinical efficacy of patients in the control group, the 95.56% of patients in the observation group is higher, with a statistical calculation of P<0.05.

Table 1 Comparison of clinical efficacy between two groups of patients [cases (%)]

Group	Number of cases	Significant effect	Effective	Of no avail	Total effective
Comparative group	45	18(40.00)	16(35.56)	11(24.44)	34(75.56)
Observation group	45	23(51.11)	20(44.44)	2(4.44)	43(95.56)
χ^2value					7.875
*P*value					<0.05

2.2. Blood pressure

Detailed data are shown in Table 2. Before treatment, there was no significant difference in blood pressure levels among different groups of patients (P>0.05). Compared with before treatment, diastolic and systolic blood pressure showed a significant decrease trend after treatment, and the decrease in the observation group was more significant, with statistical calculation of P<0.05.

Table 2 Comparison of blood pressure levels between two groups of patients ($\bar{x} \pm s$, mm Hg)

Group	Number of cases	Diastolic pressure		Systolic pressure	
		Before treatment	After treatment	Before treatment	After treatment
Comparative group	45	95.82±3.41	84.38±4.63*	142.81±5.29	126.38±4.98*
Observation group	45	95.71±3.64	75.82±4.36*	142.74±5.36	115.82±4.65*
*t*value		0.096	8.636	0.674	13.537
*P*value		>0.05	<0.05	>0.05	<0.05

Note: Compared to before treatment, * P<0.05; 1 mm Hg=0.133 kPa.

2.3. Adverse reactions

Detailed data are shown in Table 3. The incidence of adverse reactions in patients in the control group was 6.66%, while the incidence of complications in patients in the observation group was 11.11%. After statistical calculation, P>0.05 indicates no difference.

Table 3 Comparison of adverse reaction rates between two groups of patients [cases (%)]

Group	Number of cases	Headache	Drowsiness	Gastrointestinal reactions	Total occurrence
Comparative group	45	1(2.22)	1(2.22)	1(2.22)	3(6.66)
Observation group	45	2(4.44)	1(2.22)	2(4.44)	5(11.11)
χ^2value					1.461
*P*value					>0.05

3. Discussion

Hypertension is a common chronic disease in clinical practice. In general, hypertension in patients with hypertension ranges from Grade I to Grade II, with relatively severe conditions being rare.[4] Many patients with hypertension have complex causes and lack typical clinical manifestations. The harm of hypertension is not only reflected in the pressure on the blood vessel walls, but also can cause a variety of visceral diseases.*[5]* If not controlled, it can easily threaten the lives of patients [5]. Hypertensive patients are also prone to heart rate abnormalities, walking difficulties, etc., which seriously affect their normal work and life. However, in general, dizziness, tinnitus, inattention, and back neck discomfort are the main clinical manifestations of this disease.

Hypertension is a common chronic disease that requires long-term medication to maintain blood pressure stability. Currently, calcium antagonists, angiotensin converting enzyme inhibitors, angiotensin receptor antagonists, diuretics, and β Receptor blockers, etc. are used to treat patients with hypertension. In addition to maintaining a good lifestyle, patients also need reasonable medication and standardized treatment to control blood pressure at a normal level and effectively reduce the occurrence of cardiovascular and cerebrovascular diseases. The selection of reasonable drugs for treating hypertensive patients by grassroots doctors is of great significance for improving treatment effectiveness and patient compliance. Enalapril folate tablets can effectively expand blood vessels in patients during clinical application, achieving the effect of reducing blood pressure. However, it is difficult to achieve the desired therapeutic effect using this drug alone, and it needs to be combined with other drugs. As a calcium antagonist, nifedipine can reduce the vasoconstriction response of patients after use and promote the maintenance of blood pressure at a normal level. The combined use

of the two drugs can effectively improve the clinical treatment effect without increasing adverse drug reactions, and its safety is worthy of recognition. In grassroots hospitals, when the use of a single medication is not ideal, combined medication can be selected to achieve good hypotensive effects through different hypotensive mechanisms. In grassroots hospitals, it is also necessary to strengthen medication management to improve patients' treatment compliance. In this study, compared with 75.56% of the clinical efficacy of patients in the control group, 95.56% of patients in the observation group were higher; Before treatment, there was no significant difference in blood pressure levels among different groups of patients. Compared with before treatment, diastolic and systolic blood pressure showed a significant downward trend after treatment, and the decrease was more significant in the observation group; The incidence of adverse reactions in patients in the control group was 6.66%, while the incidence of complications in patients in the observation group was 11.11%. This indicates that reasonable drug treatment for hypertensive patients in grassroots hospitals has a good effect, can stabilize their blood pressure within the normal range, and combined medication will not increase adverse reactions to medication. The safety is worth affirming. Hypertension has quietly developed into one of the main diseases affecting human health at the current stage, belonging to a long-term chronic disease. As the disease progresses, it can induce cardiovascular and cerebrovascular diseases. Hypertensive patients can also engage in appropriate exercise. During the exercise process, people's movement centers will be regulated, stimulating the cerebral cortex, and the patient's lipid metabolism level will be strengthened, increasing the level of high-density lipoprotein in the blood, which can effectively reduce blood pressure levels. During exercise, the blood pressure circulation in local areas such as the scalp is improved, thereby indirectly stimulating the baroreceptors to lower blood pressure.

In summary, selecting reasonable drug treatment has a better effect on patients in grassroots hospitals. Combined medication can better control blood pressure, with a better effect, and does not increase adverse reactions. It can be widely used in clinical practice.

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