ISSN 2706-6819 Vol.5, Issue 8: 138-142, DOI: 10.25236/IJFM.2023.050820

Clinical effect of vascular targeting drugs combined with chemotherapy in advanced liver cancer

Cui Chuanbao, Zhao Qi

School of Mechanical and Architectural Engineering, Taishan University, Tai'an, Shandong, 271000, China

Abstract: *To analyze the clinical effect of vascular targeted drug combined with chemotherapy in the treatment of advanced liver cancer, the clinical effect of middle and late liver cancer is the target of this investigation.50 patients treated in the oncology department of our hospital from 2021 to 2022. Groups were grouped according to different treatment modalities, and the number of cases per group was 25. The experimental group was treated with vascular targeted drugs + chemotherapy, and the control group was treated with chemotherapy. Compare the specific implementation of the two groups. Relevant indicators in the experimental group were better than those in the control group (P <0.05). After the intervention of vascular targeted drugs + chemotherapy, the safety of patients with advanced liver cancer is improved, the existence value of tumor markers is improved, the body immunity of patients is improved, and the treatment compliance of patients is improved, which is worth promoting.*

Keywords: *Vascular targeted drugs; chemotherapy therapy; middle and advanced liver cancer; effect*

1. Introduction

Liver cancer is the tumor of the liver, usually can be divided into primary and secondary two categories, primary malignant tumor of the liver mainly derived in the epithelium or interstitial tissue of the liver, the former is called primary liver cancer incidence is higher, and the harm of the disease is greater[1]. Secondary liver cancer is called sarcoma, but it is relatively rare in clinical practice. Secondary or called metastatic liver cancer with malignant tumors of multiple organs throughout the body exist in the liver, and the liver metastasis of gastric and colorectal organs and other organs[2]. In the early stage of liver cancer, its symptoms are less, and when the liver cancer continues to develop, it will lead to obvious pain in the liver site of the patient, resulting in increasing the difficulty of clinical treatment. In clinical treatment, chemotherapy is usually used, but due to the simultaneous impact of chemotherapy on normal cells, adverse reactions will occur in patients, resulting in a significant reduction in patients' compliance with treatment [3]. In this study, the clinical effect of patients with advanced liver cancer. The basic information is as follows:

2. Data and methods

2.1 General information

Table 1: General Information

project	Control group (n=30)	Experimental group (n=30)
Number of men / women	14/16	15/15
Patient age (years)	42-77	41-78
Mean patient age (years)	49.98±9.37	49.92±10.13
Body mass index kg/m^2	17-27	17-29
Mean body mass index kg/m^2	22.09±1.69	23.02±2.06
Liver function grade (human) A, B, C	12,6,12	11,10,9
Tumor stage (human)III, IV	16,14	14,16
Inclusion rules: ① The enrolled subjects meet the diagnostic criteria for advanced liver cancer.② The enrolled subjects underwent histopathological examination.③ The participants and their family members signed the informed consent form to cooperate with the investigation and study.④ The enrolled subjects met the indications for vascular targeted drug therapy and chemotherapy.⑤ The enrolled subjects have no allergic reaction to the drug used this time.		
Elimination rules: ① The enrolled objects cannot cooperate with this survey and study.② The participants withdrew from the survey midway.③ The enrolled subjects have immune system diseases.④ The participants have mental disorders.		

The number of patients selected in the survey from 2022.1 to 12022 was 60, and grouped according

ISSN 2706-6819 Vol.5, Issue 8: 138-142, DOI: 10.25236/IJFM.2023.050820

to different treatment methods, and the number of each group was 30. Two groups simultaneously use the same nursing staff, experimental group: vascular targeted drugs + chemotherapy intervention. Control group: Chemotherapeutic intervention. There was no significant difference in patient condition, as shown in Table 1, P> 0.05.

2.2 Methods

After the admission, the patient is first examined, through the index situation, the targeted intervention for the patient with intravenous nutrition solution. When the patient is cirrhosis, the liver protection drugs can be used, so as to delay the development of the disease. In the course of liver preservation treatment, through antiviral intervention.

Control group: During the basic treatment, the puncture site was used at the right femoral artery, mainly due to the proximity of the right femoral artery to the liver and convenient for treatment. After the puncture of the patient is completed, it should be inserted in the hepatic artery by catheter intervention, observe the tumor condition of the liver by angiography, and the chemical drug should be injected into the liver. The name of injection drug is pirrobicin hydrochloride (manufacturer: Hanhui Pharmaceutical Co., Ltd.; approved name: H20045983; specification: 10mg: $C_{32}H_{37}NO_{12}$) Adjust the injection amount according to the patient's condition to be about 50mg, mitomycin (manufacturer: Shanghai Shangyao Pharmaceutical Co., LTD.; approved name: Chinese drug H31020504; specification: 10mg 10mg) injection amount is controlled at about 10mg, fluorouracil injection (manufacturer: Harbin Pharmaceutical Group Sanjing Pharmaceutical Co., LTD.; approved name: Chinese drug H23021689; specification: 10mg:0.25g content) injection amount is controlled below 1g, above 0.7g, and the injection of superliquefied iodide oil into the body is controlled at 30 ml. We should ensure that the number of consecutive treatments should be controlled within 3 times, and the time interval of each treatment should be controlled within 1 month.

Experimental group: the patients with the control group underwent chemotherapy with vascular targeted drugs, treated with apatinib mesylate half an hour after meal; (manufacturer: Jiangsu Henrui Pharmaceutical Co., Ltd.; approved name: Chinese drug approval H20140105; trade name: Eitan specification: 0.425g measurement statistics by apatinib). The daily dosage is taken according to the doctor's regulations, once a day, and the treatment cycle is 3 months. Doctors should pay close attention to the adverse reactions of patients after taking drugs in time, and should stop taking medication when patients have side effects. Or to reduce the dosage.

2.3 Observed indicators

① Two groups of toxic and side reactions.

② Comparison of tumor marker levels between the two groups.

③ Factor levels in both groups.

④ Treatment compliance in both groups.

2.4 Statistical treatment

$\bar{x}$ Software tool: SPSS26.0; through (± s) in the environment, through t, using the% of infection event incidence measurement data, through the square test, 0.05 is the middle boundary point, P is below the middle boundary point, representing the obvious difference in data.

3. Results

3.1 Toxic side effects in two groups

According to Table 2, the reaction of the experimental group was high, but there was no significant difference (P> 0.05).

ISSN 2706-6819 Vol.5, Issue 8: 138-142, DOI: 10.25236/IJFM.2023.050820

Table 2: The two groups [n; (%)]

group	diarrhoea	Itch of skin	elevation of blood pressure	albuminuria	haemorrhage	Response incidence
Control group (n=30)	0	1(3.33)	1(3.33)	1(3.33)	1(3.33)	4(13.32)
Experimental group (n=30)	1(3.33)	2(6.66)	2(6.66)	1(3.33)	1(3.33)	7(23.31)
X^2	-	-	-	-	-	1.002
P	-	-	-	-	-	0.317

3.2 Tumor marker levels in the two groups

According to Table 3, the experimental group had a better index after intervention (P <0.05).

Table 3: Comparison of tumor marker levels between the two groups (± s) $\overline{x}$

group	Example number	AFP-L3(ng/mL)		GP73(ng/mL)		AFP(μg/L)	
		Before the intervention	After 3 months of intervention	Before the intervention	After 3 months of intervention	Before the intervention	After 3 months of intervention
control group	30	9.09±0.45	6.37±0.29	89.69±6.37	63.49±5.69	62.79±3.45	35.26±4.19
experimental group	30	9.11±0.44	4.11±0.18	89.70±6.38	48.35±4.24	62.81±3.47	15.39±2.87
t	-	0.174	36.267	0.006	11.686	0.022	21.429
P	-	0.862	<0.05	0.995	<0.05	0.982	<0.05

3.3 Factor levels in the two groups

According to Table 4, the factor index has improved significantly (P <0.05).

Table 4: Comparison of factor levels between the two groups (± s, n=30) $\overline{x}$

group	TNF-α(ng/L)		IL-2(ng/L)		IL-4(ng/L)		IL-6(ng/L)		IL-10(ng/L)	
	Before the intervention	After 3 months of intervention	Before the intervention	After 3 months of intervention	Before the intervention	After 3 months of intervention	Before the intervention	After 3 months of intervention	Before the intervention	After 3 months of intervention
control group	35.45±5.63	27.47±4.28	28.96±4.61	20.41±2.97	35.49±4.17	41.99±3.27	20.36±3.54	15.42±1.32	5.67±1.22	7.23±1.28
experimental group	35.47±5.64	22.35±1.56	28.99±4.62	14.27±1.38	35.50±4.18	58.54±2.16	20.37±3.53	12.17±0.67	5.65±1.24	11.36±2.35
t	0.014	6.156	0.025	10.269	0.009	23.130	0.011	12.025	0.063	8.453
P	0.989	<0.05	0.980	<0.05	0.993	<0.05	0.991	<0.05	0.950	<0.05

3.4 Comparison of treatment compliance between the two groups

According to Table 5, the experimental group was higher (P <0.05).

Table 5: Treatment compliance in both groups [n; (%)]

group	Example number	Full compliance	Compare compliance	No compliance	Compliance rate
control group	30	5(16.67)	7(23.33)	18(60.00)	12(40.00)
experimental group	30	17(56.67)	12(40.00)	1(3.33)	29(96.67)
X^2	-	-	-	-	22.259
P	-	-	-	-	<0.05

4. Discussion

There are a large number of primary diseases in liver cancer, and the etiology and exact molecular mechanism of primary liver cancer are not clear. It is believed that the incidence is a complex process caused by multiple factors and multiple steps, which is affected by the dual factors of environment and diet. Studies on the epidemiology of liver cancer have found that hepatitis B virus, hepatitis C virus infection, drinking water pollution or alcohol may affect the incidence of liver cancer[4]. When long-term consumption of moldy or burnt food, as well as the presence of large amounts of aflatoxin in grains, cause liver cancer. When patients drink excessive alcohol for a long time, they cause alcoholism, which causes alcoholic fatty liver disease and alcoholic cirrhosis disease. In China, liver cancer is generally staged, which can be divided into four stages. The middle and late stage mainly refers to the

ISSN 2706-6819 Vol.5, Issue 8: 138-142, DOI: 10.25236/IJFM.2023.050820

four stages of liver cancer. When the liver cancer is in the middle and late stage, the systemic condition is poor, usually only through symptomatic support treatment, the purpose is to reduce the patient's pain, improve the patient's quality of life, improve and prolong the patient's life[5]. When the patient's liver cancer is in the middle and late stage, it will obviously feel wasting and fatigue, mainly by the liver cells in the body are seriously damaged, the liver function has decreased, leading to metabolic dysfunction, the toxin in the body can not be completely discharged, released in the liver, causing the patient to appear wasting. Pain accounts for 50% of the symptoms, and pain is more common. Due to the nature of liver cancer and the characteristics of the lesion, the pain appears under the right rib or shoulder process, with intermittent or persistent dull pain. When liver cancer patients are in the middle and late stage, there will be decreased appetite, which will produce obvious satiety after meals, and also have belching and indigestion[6]. The most common symptoms are decreased appetite function and abdominal distension. By distinguishing this stage from the symptoms of the digestive tract, or by being mistaken for chronic intestinal inflammation. Liver cancer in advanced stage, cancer metastasis, this kind of phenomenon is relatively common, also is one of the causes of death, due to the human cancer metastasis of different, causing symptoms are obviously different, when transferred to the lungs, can lead to cough and cough, serious even cause pulmonary embolism, lead to patients with breathing difficulties. When patients are in the middle stage of liver cancer, some patients will have fever and other symptoms, and a small number of patients will have fever symptoms of more than 39°. When the patient is in the advanced stage of liver cancer, the tumor will invade the lining of the liver and compress the local tissue. With the continuous development of the disease, some patients will have convulsions or even coma[7]。

Because in the middle and late stages of liver cancer, spread metastasis occurs, and the chance of surgical resection is small, so surgical intervention can be used in time, usually local resection[8]. Clinical patients with this condition are usually treated with radiotherapy or chemotherapy and traditional Chinese medicine. Chemotherapy is one of the commonly used methods for the nonsurgical treatment of HCC. But the presence of cancer cells and normal cells are killed. The effective dose of chemotherapy drugs is very close to the toxic dose. After the occurrence of toxic and side effects, it will have a serious impact on the digestive function of patients and the hematopoietic function of the bone marrow. Make it difficult for patients with liver cancer to receive chemotherapy, and affect the effect of treatment.

Targeted therapy refers to targeted drug therapy at the cellular molecular level[9]. This treatment can cause tumor cell death without affecting large numbers of normal tissue cells around the tumor. It has the advantages of good efficacy and convenient use. However, due to the particularity of treatment, the adaptation population is limited, and there are certain adverse reactions after treatment. In clinical practice, the drugs usually used in targeted therapy are oral drugs, such as afatinib and other drugs often used in the treatment of non-small cell lung cancer, which are oral drugs. It is particularly convenient for patients to take drugs, so as to improve patients' compliance with treatment.

In the middle and late stages of liver cancer, the effect and demand of patients differ greatly after chemotherapy, and the intervention of vascular targeted therapy can improve the therapeutic effect. Meanwhile, this drug is the latest scientific research success, which can inhibit the new cells of tumor and achieve the purpose of intervention. By relying on the specificity of drugs can act on the endothelial cells in the human body, so as to ensure that the endothelial cells of blood vessels are inhibited, thus migration, cause death, can inhibit the generation and growth of tumor cells. Better intervention for malignant tumors in lung cancer. Because the patient is in a period of doubling increase in the middle and late stages, their ability to invade normal cells is significantly stronger, resulting in a faster metastasis of cancer cells. After the combined intervention, the treatment effect was significantly enhanced. After treatment, the relevant indicators were significantly improved, which proved that the combination treatment could reduce the level of tumor markers, so as to improve the recovery efficiency of patients, better accept the next intervention, and improve the recovery rate of the body. Because when the patient is in the middle and late stage of liver cancer, the patient's body will appear abnormal immune function, when the T lymphocytes in the human body, will assist the development. In addition, the basic situation of patients can be evaluated by inflammatory factors and other indicators in clinical practice. Therefore, this study observes lymphocytes and inflammatory factors, so as to understand the patient's physical condition and the situation after intervention. The study found that the inflammatory factors and lymphocytes in the experimental group were significantly improved by the combination intervention, which proved that the combination treatment could improve the inflammation.

To sum up, after the intervention of vascular targeted drugs + chemotherapy, the safety of patients

ISSN 2706-6819 Vol.5, Issue 8: 138-142, DOI: 10.25236/IJFM.2023.050820

with advanced liver cancer is improved, the existence value of tumor markers is improved, the body immunity of patients is improved, and the treatment compliance of patients is improved, which is worth promoting.

Acknowledgements

Shandong Province College Students Innovation and Entrepreneurship Training Program Project S202210453001; Taishan University PhD Start-up Fund Y-01-2021003; Shandong Provincial Natural Science Foundation of China Youth Project ZR2021QH175.

References

[1] Xiong Huagang, Yang Zhigang, Zhang Liu, et al. Clinical efficacy and safety of hepatic artery embolization chemotherapy combined with small molecule targeted therapy for middle and advanced liver cancer [J]. Pharmaceutical industry, 2021 (13): 1-2.
[2] Huang Zhongwu. Clinical efficacy of molecular targeted drugs combined with hepatic artery embolization chemotherapy in hepatocellular carcinoma [J]. Chinese Science and Technology Journal Database (citation version) Medicine and Health, 2023 (4): 4-5.
[3] Li Xiaoli, Ge Xin. Clinical efficacy of molecular targeted drugs combined with hepatic artery embolization chemotherapy in hepatocellular carcinoma [J]. Chinese Science and Technology Journal Database (full-text edition) Medicine and Health, 2021 (11): 21-22.
[4] Li Xiaoli, Ge Xin. Clinical efficacy of molecular targeted drugs combined with hepatic artery embolization chemotherapy in hepatocellular carcinoma [J]. Chinese Science and Technology Journal Database (full-text edition) Medicine and Health, 2021 (11): 12-13.
[5] Yang Rongbin, Li Wei, Li Shaoming, et al. Effect of small molecule targeted therapy combined with hepatic artery embolization chemotherapy on clinical efficacy and survival time in patients with advanced liver cancer [J]. China Practical Medicine, 2022, 17 (2): 11-13.
[6] Defang F, Wei S, Shan J, et al. Clinical effects of recombinant human vascular endothelial inhibitor combined with chemotherapy for advanced gastrointestinal cancer[J]. Journal of Modern Oncology, 2015.
[7] Li Youzan, Chen Kai, Zhao Ji, et al. Clinical study of hepatic artery perfusion chemotherapy combined with immunization and targeted therapy for unresectable hepatocellular carcinoma [J]. Clinical Journal of Practical Hospital, 2022 (23): 19-21.
[8] Yan Xiangyong, Li Jun, Niu Xiaojuan, et al. Safety and clinical efficacy of PD-1 inhibitors combined with targeted drugs in advanced primary liver cancer [J]. Modern Medical Oncology, 2023, 31 (5): 6-7.
[9] Diao Yongen, Wang Yu, Luo Yunxia, Guo Jian, Zhu Ying, Yu Zhonghe. Progress in the treatment of patients with advanced liver cancer [J]. Liver Disease Journal of Integrated Traditional Chinese and Western Medicine, 2022, 32 (11): 1040-1044.