

Clinical Diagnosis and Treatment of Enteropathy-associated T-cell Lymphoma

Yudi Miao¹ and Qiaojiajie Zhao^{2*}

¹Department of Hematology, Shaanxi Provincial People's Hospital, 256 Youyi West Road, Xi'an City, Shaanxi Province, China

²Blood Research Department, Shaanxi Provincial People's Hospital, 256 Youyi West Road, Xi'an City, Shaanxi Province, China

*Corresponding author (E-mail: miaoyudi26@163.com)

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Abstract: To investigate the clinical characteristics of enteropathy-associated T-cell lymphoma(EATL) and to give treatment strategies. **METHODS:** From 2019.02-2022.02, 10 patients with enteropathy-associated T-cell lymphoma were seen in our hospital, their clinical data were retrospectively analyzed, and practical treatment plans were provided. **Results:** None of the patients had a history of intestinal disease and all presented to the hospital because of symptoms occurring in the gastrointestinal tract. Five patients had intestinal perforation and underwent dissection, three had small bowel masses and underwent surgery, and two had T-cell lymphoma and underwent related treatment. Six patients had lesions in the small intestine and the others had lesions in the rectum. According to AnnArbor clinical staging, 9 patients(90%) had stage I+II and 1 patient(10%) had stage III. Gastrointestinal lymphoma AnnArbor clinical staging was the same as Lugano clinical staging. 6 patients with B symptoms, 6 with physical status score ≥ 2 , 5 with IPI > 2 , 6 with PIT > 6 ; all patients had normal examination regardless of bone marrow examination, $\beta 2$ -microglobulin, or glycoconjugate antigen-125, erythrocyte sedimentation rate. 1 patient with anemia, 6 with decreased albumin, 2 with elevated lactate dehydrogenase, and 1 case with increased C-reactive protein. According to immunohistochemical hints, 6 cases were CD56 positive and 4 in situ hybridization EBER positive; in the mid-term evaluation of combined patients, the complete remission(CR) rate was 90% in 10 patients; in the DA-EPOCH regimen, the complete remission(CR) rate was 80% in 10 patients. At the completion of 6 chemotherapy courses, all chemotherapy patients were in complete remission(CR) at the end of the period assessment, but 3 of them relapsed within one year, and the disease could not be controlled with the implementation of second-line regimen and chemotherapy again. The follow-up period was 1-25 months, with a high follow-up rate of 100% up to the follow-up time, and 6 patients died, with an overall 2-year survival rate of 40%. **Conclusion:** Enteropathy-associated T-cell lymphoma is highly aggressive, and after chemotherapy, patients can be treated but are prone to relapse. The use of allogeneic hematopoietic stem cell transplantation(ASCT) becomes the first-line consolidation therapy, which cannot obtain long-term efficacy and needs to be explored.

Keywords: Enteropathy; T-cell lymphoma; clinical diagnosis and treatment analysis

With the gradual improvement of people's living standard, they are prone to suffer from enteropathy-related T-cell lymphoma under the influence of dietary habits; and because of environmental pollution and food contamination, enteropathy-related T-cell lymphoma is increasing year by year, which brings troubles to patients. To address these problems, both researchers and health care professionals should adopt practical treatment options to enable patients to alleviate their suffering as well as recover as soon as possible. Among peripheral T-cell lymphomas, enteropathy-associated T-cell lymphoma is a specific type with an annual incidence of one in a million in Western countries. WHO classifies EATL into classic(type I) and monomorphic(type II). Type II is predominant in China. Because EATL is relatively rare, it is not commonly reported. Very often, it does not attract attention, and when people encounter such a disease, it can also lead to pessimism due to treatment problems. In order

to alleviate the pessimism of patients, medical and nursing staff should provide patients with practical treatment plans based on previous clinical experience, combined with domestic and international clinical experience, so that patients can receive treatment while also relieving their psychological burden, which is more conducive to the treatment of the disease, and make positive contributions to clinical research and treatment in this field. In this paper, we discuss the clinical characteristics of EATL and adopt a practical treatment strategy. It is reported as follows:

1 Materials and Methods

1.1 Basic data

From 2019.02-2022.02, 10 patients with enteropathy-associated T-cell lymphoma were seen in our hospital, and their clinical data were retrospectively analyzed and practical treatment plans were provided. Inclusion criteria:(1) the patients did not have other diseases that interfered with the study;(2) the patients did not have psychiatric disorders;(3) the patients were not in pregnancy or lactation;(4) the patients were willing to participate in this study. Exclusion criteria:(1) the patient had a disease that interfered with the study;(2) the patient had a psychiatric disease;(3) the patient was pregnant or lactating; and(4) the patient was not willing to cooperate with this study. The underlying data showed that the number of male patients was 8 and the remaining 2 were the number of female patients, aged between 30 and 75 years with a mean age of(60.21+2.12) years, who presented with digestive symptoms such as abdominal pain and black stools. There was no previous history of relevant enteropathy such as celiac disease. According to the diagnostic criteria of EATL, the clinical stage was AnnArbor, lugano, which was analyzed by adopting not only the International Prognostic Index(IPI) but also the Prognostic Index of Peripheral T-Cell Lymphoma(PIT).

1.2 Methods

After surgical treatment, all 10 patients received combination chemotherapy. During treatment, suspended red blood cells can be transfused in response to routine blood test results, platelets can be mono-collected, and granulocyte colony-stimulating factor can be added. Patients are treated with chemotherapy using the DA-EPOCH regimen, and the dose of chemotherapy is adjusted for the next course of treatment from the results of routine blood tests in the interval between chemotherapy sessions. Patients were evaluated for efficacy using PET-CT examinations after 3 or 6 cycles of chemotherapy were completed. The efficacy of patients was evaluated according to the criteria for judging the efficacy of malignant tumors. At follow-up, as of 04/2020. The overall survival time was from diagnosis to death or last follow-up time.

1.3 Observation indexes

Clinical characteristics of 10 patients were analyzed; immunohistochemical results of 10 patients with enteropathy-associated T-cell lymphoma(EATL); chemotherapy regimens, clinical efficacy and follow-up outcomes of 10 patients with enteropathy-associated T-cell lymphoma(EATL).

1.4 Statistical methods

Using SPSS software, the data were statistically analyzed, and Kaplan-meier, the survival rate of patients was used.

2 Results

2.1 Clinical characteristics

Five patients had intestinal perforation and underwent dissection, three had small bowel masses and underwent surgery, and two had T-cell lymphoma and underwent related treatment. six patients had lesions in the small intestine and the others in the rectum. According to AnnArbor clinical d staging, 9 patients(90%) had stage I+II and 1 patient(10%) had stage III. AnnArbor clinical staging of gastrointestinal lymphoma was the same as lugano clinical staging. 6 patients with B symptoms, 6 had a physical status score ≥ 2 , 5 had an IPI > 2 and 6 had a PIT > 6 .

2.2 Laboratory and immunohistochemical examinations

All patients had normal examination regardless of bone marrow examination, $\beta 2$ -microglobulin, or glycoconjugate antigen-125 and erythrocyte sedimentation rate. 1 patient was anemic, 6 had decreased albumin, 2 had elevated lactate dehydrogenase, and 1 had increased C-reactive protein. According to immunohistochemical hints, 6 cases were CD56 positive and 4 in situ hybridization EBER positive. (As shown in Table 1).

Table 1: Immunohistochemical results of 10 patients with enteropathy-associated T-cell lymphoma(EATL).

Cases	CD3	CD4	CD5	CD8	CD43	CD56	CD38	CD20	PAX-5	TIA-1	GninB	perfarin	CD30	KI-67	EBER	Tery rearrangemen
1	++	ND	++	-	-	ND	ND	-	++	-	ND	ND	ND	++	-	ND
2	ND	-	++	-	ND	ND	++	++	-	+	ND	ND	-	++	ND	ND
3	+	-	++	ND	-	+	ND	++	ND	-	++	+	ND	+	ND	ND
4	-	++	-	+	ND	+	+	-	ND	+	-	++	-	ND	+	ND
5	ND	+	++	-	ND	+	-	++	-	ND	++	-	ND	-	+	ND
6	+	-	++	ND	-	-	++	+	ND	-	-	+	++	ND	-	ND
7	++	ND	-	-	-	+	+	ND	-	++	+	ND	-	ND	+	ND
8	ND	+	-	-	++	-	ND	-	+	+	-	ND	-	+	+	ND
9	-	+	ND	+	-	+	+	ND	-	+	+	+	ND	+	ND	+
10	-	+	-	-	ND	+	++	-	ND	++	-	+	+	-	ND	+

2.3 Efficacy and follow-up

The complete remission(CR) rate was 90% in 10 patients at the midterm assessment in the combined patients and 80% in the DA-EPOCH regimen. At the completion of 6 chemotherapy courses, all chemotherapy patients were in complete remission(CR) at the end of the period assessment, but 3 of them relapsed within one year, and the disease could not be controlled with the implementation of second-line regimen and chemotherapy again. The follow-up period was 1-25 months with a high follow-up rate of 100% up to the follow-up time, and 6 patients died with an overall 2-year survival rate of 40%.(As shown in Table 2).

3 Discussion

With the gradual improvement of people's living standards, various dietary irregularities or wrong dietary methods may lead to patients suffering from enteropathy, especially enteropathy-associated T-cell lymphoma. On the other hand, enteropathy has increased because of environmental pollution as well as food contamination. In order to treat enteropathy-associated T-cell lymphoma, prior knowledge of its clinical features, the patient's immunohistochemical results, and the patient's chemotherapy regimen, clinical outcomes, and follow-up outcomes should be obtained. This information will enable health care providers to exercise practical treatment options for patients and facilitate proper treatment and early recovery. If the patient has certain problems, the health care provider can also identify the cause of the problem and adjust the status for the patient according to the clinical characteristics; if the patient has adverse reactions, the health care provider will also identify the cause according to the patient's response and provide a treatment plan for the patient. It can be seen that no matter what state the patient is in or what problems occur, the medical and nursing staff can provide or adjust a practical treatment plan for the patient according to the specific situation, which makes the patient's treatment smoother and the effect is naturally more remarkable. In terms of the clinical characteristics of the patients, five patients had intestinal perforation and underwent dissection, three had small bowel masses and underwent surgery, and two had T-cell lymphoma and underwent related treatment. six patients had lesions in the small intestine and the others in the rectum. According to AnnArbor clinical d staging, 9 patients(90%) had stage I+II and 1 patient(10%) had stage III. AnnArbor clinical staging of gastrointestinal lymphoma was the same as lugano clinical staging. 6 patients with B symptoms, 6 with a physical status score ≥ 2 , 5 with an IPI > 2 and 6 with a PIT > 6 . According to the different clinical characteristics of the patients, different treatment plans were implemented for the patients, which could not only lead to proper treatment, but also lead to rapid treatment and rapid turnaround of the patients, which could lead to the eradication or remission of the malignant tumors. Through the clinical characteristics of patients with different malignant tumors, treatment is carried out according to the grade to promote proper treatment on the one hand, and to promote remission

Table 2 : Chemotherapy regimens, clinical outcomes and follow-up outcomes in 10 patients with enteropathy-associated T-cell lymphoma(EATL).

Case	Post-operative residual intestinal lesions	Primary treatment chemotherapy regimen	Interim assessment	Chemotherapy regimen(after midterm evaluation)	End-stage evaluation	Recurrence	Post-relapse chemotherapy regimen	Efficacy evaluation(after relapse)	Follow-up outcome	Follow-up time(months)
1	Yes	-	-	-	-	-	-	-	Death	2
2	Yes	-	-	-	-	-	-	-	Death	3
3	Yes	DA-EPOCHX3	SD	DA-EPOCHX3	CR	Yes	PEPC	PD	Death	12
4	No	DA-EPOCHX3	CR	DA-EPOCHX3	CR	Yes	MINEX3	PD	Death	25
5	Yes	DA-EPOCHX3	CR	DA-EPOCHX3	CR	Yes	MINEX2	PD	Death	11
6	Yes	DA-EPOCHX3	CR	DA-EPOCHX3	CR	Yes	DHAPX2+MTX	PD	Death	13
7	No	DA-EPOCHX3	CR	GemOxx3	CR	No	-	-	Survival	16
8	No surgery	DA-EPOCHX3	CR	DA-EPOCHX3	CR	No	-	-	Survival	10
9	Yes	DA-EPOCHX3	CR	EPOCHX3+ASCT	CR	No	-	-	Survival	6
10	No	GemOxx3	CR	GemOxx3	CR	No	-	-	Survival	10

on the other hand, which is conducive to the further work of medical and nursing staff. Generally speaking, patients in the low-risk group are relatively easy to treat and the treatment methods adopted are relatively simple, and they can recover quickly; patients in the high-risk group are relatively complex to treat and the treatment methods adopted are relatively complicated, and the treatment process takes more time and the patients recover relatively slowly. Therefore, in order to promote early recovery or alleviate the condition of patients, we should understand the clinical characteristics of patients, and provide patients with practical treatment plans according to all clinical characteristics of patients, so as to promote patients to better accept surgical treatment and avoid postoperative infection, which may affect postoperative recovery or even lead to death. At the same time, the clinical experience is summarized, the clinical treatment effect of patients is analyzed, and the clinical experience is summarized and summarized, and the effective clinical experience is promoted to make positive contributions to the treatment and research in this field. From the immunohistochemical results of the patients, all patients had normal examination regardless of bone marrow examination, β 2-microglobulin, or glycoconjugate antigen-125 and erythrocyte sedimentation rate. 1 patient was anemic, 6 cases had decreased albumin, 2 cases had elevated lactate dehydrogenase, and 1 case had increased C-reactive protein. According to immunohistochemical hints, 6 cases were positive for CD56 and 4 were positive for in situ hybridization EBER. It can be seen from the results that the patients, after examination, possess immunity despite the presence of certain diseases themselves. In other words, the program can prompt patients to bring their own immune function, which can alleviate tumor spread on the one hand and help treat the disease on the other. Even after undergoing surgical treatment, patients will not suffer from complications due to fear of infection, allowing them to receive treatment quickly and bring the malignant tumor under control. At the same time, because the immunohistochemistry results are more favorable, patients can achieve remarkable results even after undergoing surgery, and will not suffer from infections in the incision due to lack of immunity after surgery, and can also heal the wound quickly. In addition, the patient is more confident to undergo the surgery and more optimistic because he/she is self-immune and informed by the medical staff, and the surgical treatment is naturally more successful. In terms of the patients' chemotherapy regimen, clinical outcomes and follow-up outcomes, the complete remission(CR) rate was 90% in 10 patients in the combined patients' midterm evaluation, and 80% in 10 patients in the DA-EPOCH regimen. At the completion of 6 chemotherapy courses, all chemotherapy patients were in complete remission(CR) at the end of the period assessment, but 3 of them relapsed within one year, and the disease could not be controlled with the implementation of second-line regimen and chemotherapy again. The follow-up period was 1-25 months, with a high follow-up rate of 100% up to the follow-up time, and

6 patients died, with an overall 2-year survival rate of 40%. It can be seen that, from the results, although good efficacy was also achieved, there is a need to improve the treatment regimen. Although given the limitations of the current medical level, it is also necessary to take practical and effective strategies to make patients get proper treatment under limited conditions, and to learn from the experience of the treatment process on the one hand, and the lessons of the treatment process on the other hand, to make patients get proper treatment, to provide patients with a proven treatment plan, to do a specific analysis of each case, so that patients get individualized treatment and also get We also need to learn from the experience of the treatment process, so that patients can be treated properly, provide patients with effective treatment plans, and provide specific analysis, so that patients can receive individualized treatment and specific treatment. In this way, patients can be treated effectively, and treatment plans and strategies can be improved, and practical clinical experience can be developed to provide practical treatment measures for patients in related fields, so that they can receive treatment in a faster and less painful way, and patients can be relieved and recovered as soon as possible, and patients can be treated properly. In conclusion, with regard to enteropathy-associated T-cell lymphoma, it is important to understand not only the clinical features but also the immunohistochemical results of the patient during the treatment process, as well as the chemotherapy regimen, clinical outcomes, and follow-up outcomes of the patient. By implementing such treatment steps, patients can be properly treated and relevant experiences as well as drawbacks can be summarized, based on which proven treatment protocols can be adopted and proven clinical experiences can be provided to patients, leading to less suffering while receiving treatment, faster recovery after receiving treatment, avoiding risks as much as possible, and providing patients with better chances as well as conditions for recovery.

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Conflicts of Interest

The authors declare no conflict of interest.

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