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Bleeding from a Small-Intestinal Ulcer Associated with Chronic Hepatitis C

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Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

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Conflict of interest: None declared

Patient: Male, 69
Final Diagnosis: Lymphoma
Symptoms: Gastrointesinal haemorrhage
Medication: —
Clinical Procedure: —
Specialty: Gastroenterology and Hepatology

Objective: Unusual clinical course
Background: Hepatitis C virus infection is probably the most common chronic viral infection and affects an estimated 180 million people worldwide. Extrahepatic manifestations are well recognized among patients with chronic HCV infection.
Case Report: We report a case of melena occurring in a 69-year-old Japanese man who had been diagnosed with CHC and who was treated with antiviral therapy.
Conclusions: Finally, he was diagnosed with multiple small intestine ulcers in a short time. We herein report the case of HCV with rapidly developing small intestine ulcers.

MeSH Keywords: Hepatitis C, Chronic • Intestine, Small • Lymphoma, Large B-Cell, Diffuse

Full-text PDF: https://www.amjcaserep.com/abstract/index/idArt/908594

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Background

Recently, the development of direct-acting antivirals (DAAs) is changing the therapeutic options for curing chronic hepatitis C virus (HCV) infection. These treatments may be performed for elderly patients who have been suffering from hepatitis for a long time. HCV infection has been associated with several immune-mediated processes, including hematologic disorders such as B cell non-Hodgkin lymphoma (B-NHL). The most common B-NHL subtypes associated with HCV infection include marginal zone lymphoma (MZL), Waldenström's macroglobulinemia (WM), lymphoplasmacytic lymphoma, and diffuse large B cell lymphoma (DLBL). The risk of lymphoma occurrence was reported to be 60% higher in patients with chronic HCV infection as compared with non-HCV controls [1]. We present a rare case of rapid progression of DLBL in a patient with chronic hepatitis C (CHC) and subsequent formation of a small-intestinal ulcer due to the effect of chemotherapy.

Case Report

A 69-year-old Japanese man who had been diagnosed with CHC (Table 1) was treated with pegylated interferon plus ribavirin therapy and achieved rapid virological response (RVR). The dual therapy was continued for approximately 24 weeks, and then low-echoic masses was detected in the liver by ultrasound, although no mass was detected by computed tomography at the beginning of Peg-RBV treatment. He was finally diagnosed with DLBL in the right axillary lymph nodes, liver (Figures 1, 2) and colon (Figure 3, arrow). There was no lesion in the upper gastrointestinal tract, although he had undergone distal gastrectomy in the past. We administered THP-COP chemotherapy regimen, and consequently, the masses in the liver became reduced in size (Figure 4). After a course of chemotherapy, the patient had significant amounts of melena. We performed an emergent upper endoscopy and observed rapidly disseminated tumors and destruction of the tumor and formation of an ulcer by disrupting the tumor, in the duodenal second portion, which was not detected 6 months earlier (Figure 5). We performed blood transfusion and continued chemotherapy, but the patient finally died of neural invasion from lymphoma.

Discussion

There are reports in the literature describing a possible pathogenetic role of HCV infection in the development of aggressive

Table 1. Laboratory data on admission.

[CBC]					
WBC	3800/μl	**[Chemistry]**		ANA	<40
Neut	49%	T-bil	0.4 mg/dl	AMA	(–)
Eo	3.50%	D-bil	0.1 mg/dl	HBsAg	(–)
Baso	0.40%	AST	61 IU/l	sIL-2R	487 U/ml
Mon	5.20%	ALT	51 IU/l		
Lymph	37.40%	ALP	443 IU/l	**[Virus background]**	
RBC	463×10⁴/μl	LDH	181 IU/L	HCVRNA	6.6 LogIU/ml
Hb	13.5 g/dl	CHE	256 IU/l	Genotype	1B
Ht	40.30%	γ-GT	83 IU/l	Core 70	wild
Plt	18.9×10⁴/μl	TP	7.5 g/dl	Core 91	wild
		Alb	3.6 g/dl	ISDR variation	8 mutants
[Coagulation]		CRP	0.17 mg/dl	**[Genetic variations in host]**	
PT	110%	T-Cho	145 mg/dl	IL28B	
APTT	30.4 sec	TG	107 mg/dl	rs8099917	MAJOR
Fibrinogen	227 mg/dl	BUN	13.4 mg/dl	rs11881222	MAJOR
		Cr	0.48 mg/dl	rs8103142	MAJOR

Alb – albumin; ALP – alkaline phosphatase; ALT – alanine aminotransferase; ANA – antinuclear antibody; AMA – antimitochondrial antibody; APTT – activated partial thromboplastin time; AST – aspartate aminotransferase; BUN – blood urea nitrogen; CBC – complete blood count; CHE – cholinesterase; Cr – creatinine; CRP – C-reactive protein; D-bil – direct bilirubin; Hb – hemoglobin; Ht – hematocrit; LDH – lactate dehydrogenase; Plt – platelets; PT – prothrombin time; RBC – red blood cells; T-bil – total bilirubin; T-chol – total cholesterol; TP – total protein; WBC – white blood cells; γ-GT – γ-glutamyltransferase.

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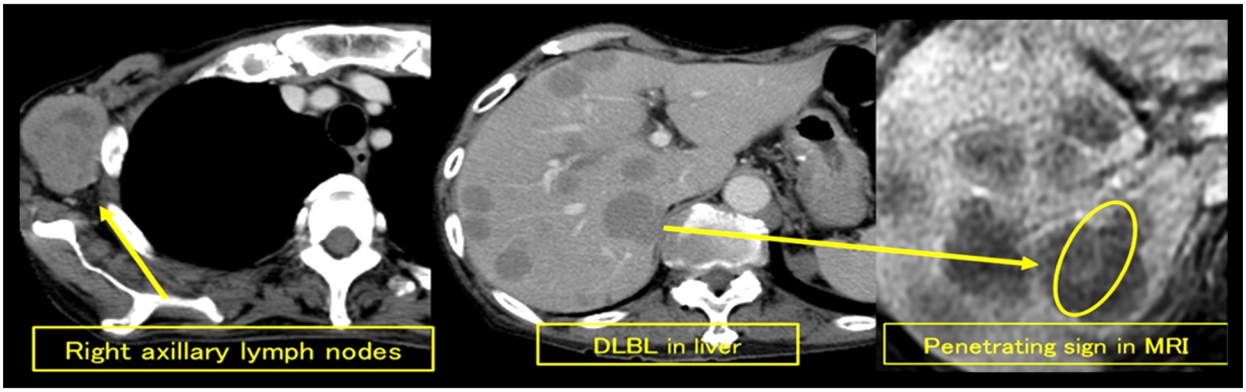

Figure 1. Computed tomography of the chest and abdomen, and MRI of abdomen. The patient had rapid growing masses in the right axillary lymph nodes and multiple masses in the liver. The tumor showed penetrating sign in MRI.

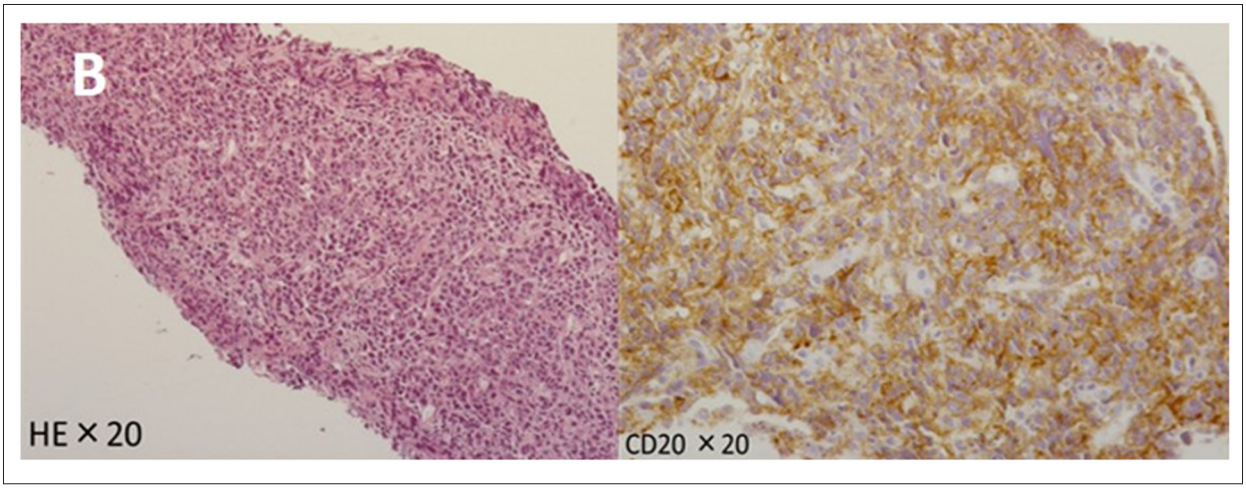

Figure 2. Liver microscopic findings showed a diffuse large B cell non-Hodgkin's lymphoma in hematoxylin-eosin and immunohistochemically, and the malignant cells were positive for CD20 (B cell marker).

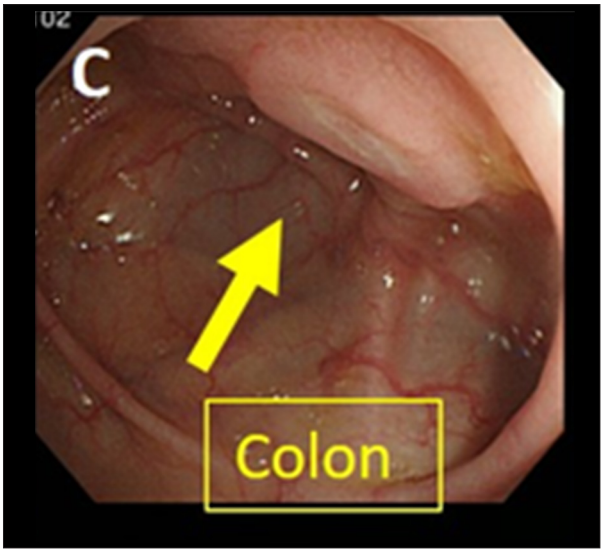

Figure 3. Small lesion in the transverse colon in the colonoscopy, which was subsequently diagnosed as diffuse large B cell non-Hodgkin's lymphoma.

B cell lymphomas. HCV transgenic mice expressing the full HCV genome in B cells have been shown to develop DLBCL in 25% of cases [2].

The outcome of patients with primary lymphoma in the small intestine is poor compared with that of patients with lymphoma in other locations in the GI tract [3]. Although the common causes of small intestine hemorrhage are vascular lesions, ulcerations, small intestine tumors, and jejunal diverticulum, we herein report a rare case with a duodenal ulcer that was caused by disrupting the aggressive DLBL after chemotherapy. Ulcers in the small intestine are sometimes associated with massive, life-threatening hemorrhage and are difficult to treat because it is difficult to survey the small intestine by the usual upper gastrointestinal endoscopy. Therefore, special diagnostic approaches such as capsule endoscopy or double-balloon endoscopy are necessary, and a flexible spectral imaging color enhancement is useful in detecting small ulcerative lesions [4].

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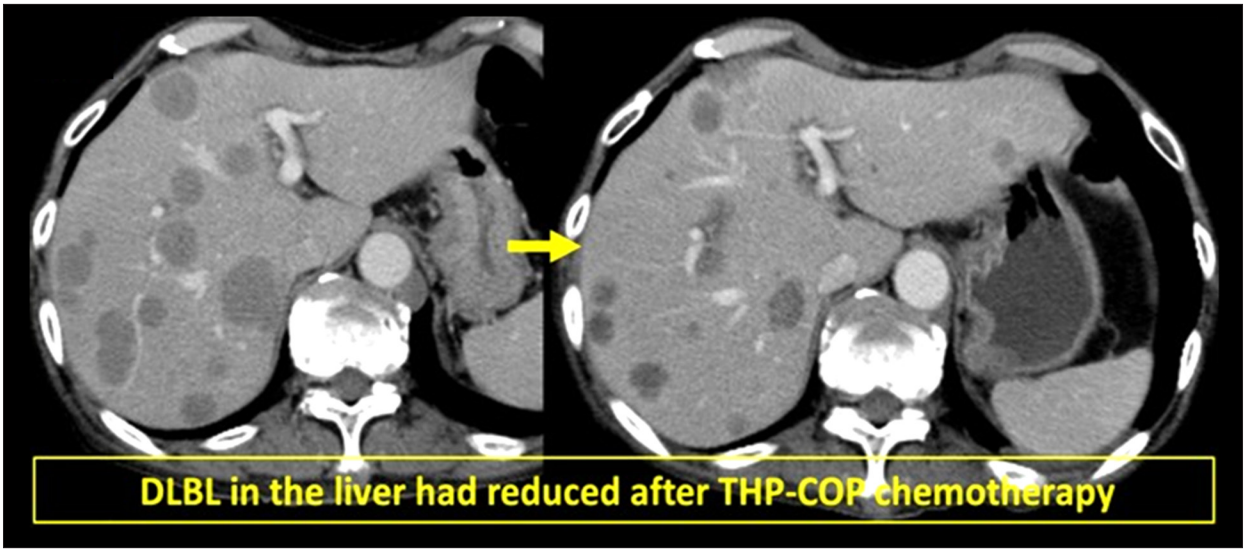

Figure 4. The mass in the liver was reduced in size after THP-COP chemotherapy in the abdominal CT.

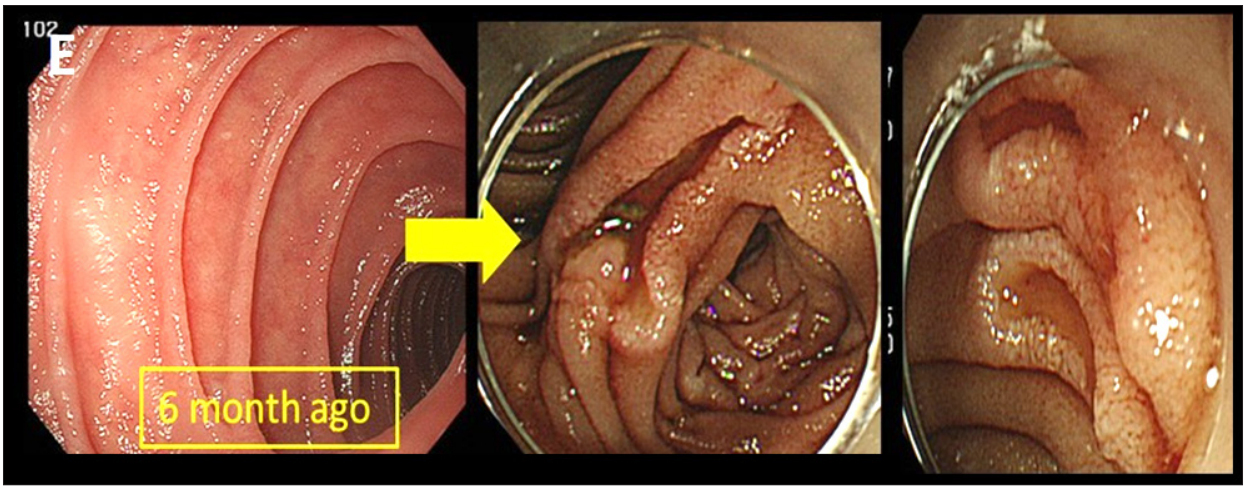

Figure 5. The formation of lymphoma and an ulcer caused by disrupting the tumor in the duodenum, which was not present 6 months earlier in the gastrointestinal endoscopy.

Conclusions

Anti-HCV therapy has been shown to play a significant role in the treatment and prevention of HCV-associated B-NHL diseases. However, systemic therapy of B-NHL in patients with HCV infection requires close monitoring of hepatic function and viral activity. The risk of hematologic disorders should be considered in antiviral therapy, and DAAs are mainly used in outpatient therapy for HCV infection. In such cases, hepatologists need to consider the possibility of HCV-associated systematic diseases [5].

Conflict of interest

None.

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