Table 1
IL-10 promoter haplotypes in chronic hepatitis C and healthy subjects

Haplotype (−1082/−819/−592)	Healthy subjects (controls)				Japanese chronic HCV patients		
	Spanish ($2n = 710$)	White ($2n = 482$)	Caucasoid ($2n = 238$)	Japanese ($2n = 104$)	Non-progressive F0/1 ($2n = 68$)	Intermediate F2/3 ($2n = 66$)	Progressive F4 ($2n = 94$)
ATA	0.25	0.22	0.21	0.69 $n = 72$	0.67 $n = 46$	0.6 $n = 40$	0.68 $n = 64$
ACC	0.33	0.29	0.28	0.27 $n = 28$	0.24 $n = 16$	0.35 $n = 23$	0.3 $n = 29$
GCC	0.42	0.49	0.51	0.04 $n = 4$	0.09 $n = 6$	0.05 $n = 3$	0.01 $n = 1$

Note: Data on the Spanish control subjects are from Jose et al., Liver 2002;22:245–251. Data on the white control subjects are reprinted with from Sam Lim et al., Lancet 1998;352:113. Data on the Caucasoid control subjects are from Hajeer et al., Scand J Rheumatol 1998;27:142–145.

the Japanese population (Table 1) and, therefore, the association between disease severity and haplotype may differ with race.

Our results lead to the conclusion that, in chronic hepatitis C, the putative high IL-10 production haplotype GCC is more likely to be associated with inhibition of the progression of liver fibrosis. In fact, endogenous IL-10 has been shown to reduce the intrahepatic inflammatory response and to limit hepatotoxicity in several models of liver injury. Moreover, recombinant IL-10 has been reported to decrease hepatic inflammation and reduce liver fibrosis in patients with chronic hepatitis C [5]. Our findings suggest that IL-10 promoter polymorphisms have an important role in chronic inflammation and fibrogenesis in this disease. Because the frequency of the high IL-10 producing GCC haplotype in the Japanese population is less than in Western populations, this may be one of the reasons why Japanese chronic hepatitis C patients have a worse prognosis than Western patients do. However, the mechanisms of genetic action are complex. Further studies are needed to address the effects of these polymorphisms on IL-10 expression and to confirm these observations in Western populations.

Hisayuki Hamada[1,2], Hiroshi Yatsuhashi[1], Koji Yano[1], Kokichi Arisawa[2], Kazuhiko Nakao[2], Michitami Yano[1]
[1]*Clinical Research Center, WHO Collaborating Center for Reference and Research on Viral Hepatitis, National Nagasaki Medical Center, Kubara 2-1001-1, Omura 852-8562, Nagasaki, Japan*
[2]*First Department of Internal Medicine, Nagasaki University School of Medicine, Nagasaki, Japan*
[3]*Department of Preventive Medicine and Health Promotion, Nagasaki University School of Medicine, Nagasaki, Japan*

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Cutae morphea associated with chronic hepatitis C

To the Editor:

Chronic hepatitis C (HCV) infection has been associated with numerous dermatologic conditions including lichen planus [1], porphyria cutanea tarda [2], cutaneous necrotizing vasculitis [3], erythema nodosum and multiform [4], urticaria [5] and, more recently systemic sclerosis [6]. To our knowledge, there has been no previous report of cutae morphea (localized scleroderma) among patients with HCV. In this communication, we report two patients with HCV-RNA-positive HCV infection and cutae morphea.

Case # 1 (WB): A 51-year-old African American (AA) male was referred to our service for further evaluation and management of his long-term HCV seropositivity. Two years earlier he noticed skin pigmentation and 'tightness' as well as articular and bone pains in all four extremities that got progressively worse. He was seen by a rheumatologist

Table 1
Patients' characteristics

	Case # 1	Case # 2
Age	51	47
Gender	M	M
Race	AA	AA
ALT (iu/l)	187	68
AST (iu/l)	36	53
HCV-Ab	Positive	Positive
HCV-RNA (10^3 copies/ml)	243	850
Platelets (10^3/mm^3)	187	348
Cryoglobulins	Positive	N/A[a]
ANA	Negative	N/A[a]
HbsAg	Negative	Negative
HbsAb	Negative	Negative
HbcAb	Positive	Negative
Skin disease	Cutae morphea	Cutae morphea

[a] N/A, not available.

who diagnosed this condition as cutae morphea (localized scleroderma) and treated him with steroids and Plaquenil. Skin and muscle biopsies were diagnostic of morphea. A liver biopsy revealed mild piece-meal necrosis, portal inflammation and fibrosis with a Knodell hepatitis activity index of 5.

Case # 2 (CL): This is a 47-year-old AA male seen for further management of his chronic hepatitis C. Patient's past medical history included hypertension and skin pigmentation of recent onset diagnosed by a rheumatologist as cutae morphea. A liver biopsy was performed, which revealed moderate chronic hepatitis with a Knodell score of 7. Patient was started on combination antiviral treatment with interferon and ribavirin.

The demographics as well as the clinical and laboratory characteristics of these patients are shown in the Table 1.

Dermatologic disorders have long been recognized as part of the extrahepatic manifestations of HCV infection [7], albeit no scientific proof has been provided yet that establishes causality [8]. Thus, the association of morphea with HCV infection reported in our patients may very well be fortuitous but nonetheless real.

Anastasios A. Mihas, Souheil G. Abou-Assi,
Douglas M. Heuman
Division of Gastroenterology, McGuire Veterans Affairs Medical Center (111N) and Medical College of Virginia, Commonwealth University, 1201 Broad Rock Boulevard, Richmond, VA 23249, USA

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