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High prevalence of hepatitis C in patients with thalassemia and patients with liver diseases in Myanmar (Burma).

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High prevalence of hepatitis C in patients with thalassemia and patients with liver diseases in Myanmar (Burma).*

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Abstract

We conducted Myanmar-Japan cooperation studies on hepatitis B and hepatitis C virus markers in patients with thalassemias and those with liver diseases. Among the 102 patients with liver diseases, 92% had a history of hepatitis B virus infection (antibody to hepatitis B core antigen positive), 35% were hepatitis B surface antigen positive, 39% were positive for anti-HCV. Among 28 patients with hepatocellular carcinoma, 46% had hepatitis B surface antigen, 21.4% had antibody to hepatitis C virus, and 7% were positive for both hepatitis B surface antigen and anti hepatitis C virus. The history of HCV infection among blood recipients at the Haematology Department of the Yangon General Hospital and at the Yangon Children's Hospital was found to be 55.5% and 46.7%, respectively, which is comparable to the history of hepatitis B infection (66.7% and 46.7%, respectively). This preliminary survey also encountered 2 cases positive for anti-HCV among 34 voluntary blood donors. This survey is the first one to report that hepatitis C is at the epidemic stage in Myanmar. As there is no effective treatment for hepatitis C in this country, a screening program for blood used in transfusion should be started immediately.

KEYWORDS: hepatitis C, Myanmar (Burma), thalassemia, hepatitis B

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Brief Note

High Prevalence of Hepatitis C in Patients with Thalassemia and Patients with Liver Diseases in Myanmar (Burma)

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We conducted Myanmar-Japan cooperation studies on hepatitis B and hepatitis C virus markers in patients with thalassemias and those with liver diseases. Among the 102 patients with liver diseases, 92% had a history of hepatitis B virus infection (antibody to hepatitis B core antigen positive), 35% were hepatitis B surface antigen positive, 39% were positive for anti-HCV. Among 28 patients with hepatocellular carcinoma, 46% had hepatitis B surface antigen, 21.4% had antibody to hepatitis C virus, and 7% were positive for both hepatitis B surface antigen and anti hepatitis C virus.

The history of HCV infection among blood recipients at the Heamatology Department of the Yangon General Hospital and at the Yangon Children's Hospital was found to be 55.5% and 46.7%, respectively, which is comparable to the history of hepatitis B infection (66.7% and 46.7%, respectively). This preliminary survey also encountered 2 cases positive for anti-HCV among 34 voluntary blood donors.

This survey is the first one to report that hepatitis C is at the epidemic stage in Myanmar. As there is no effective treatment for hepatitis C in this country, a screening program for blood used in transfusion should be started immediately.

Key words: hepatitis C, Myanmar (Burma), thalassemia, hepatitis B

Hepatitis C virus (HCV) infection is a world-wide problem of much current concern (1, 2), with HCV infection now recognized as a major risk factor of hepatocelluar carcinoma (3). A higher prevalence of HCV has been found in Southeast Asian countries, such as Thailand, Malaysia and India than in other demographic locations. However, there have been no survey reports regarding HCV in Myanmar (2, 4). From 1996 through 1998, we conducted Myanmar-Japan cooperation studies on hepatitis B and hepatitis C virus markers in patients with thalassemias and those with liver diseases. This survey is the first to report that hepatitis C infection is at the epidemic stage in Myanmar.

The subjects were 102 patients (79 males, 23 females, age 47 ± 12) including 28 hepatocellular carcinoma patients (25 males, 3 females, age 47 ± 12) from the Hepatology Department, Yangon General Hospital (YGH), Yangon, Myanmar, 18 patients (6 males, 12 females, age 20 ± 9) receiving blood transfusions from the Haematology Department of YGH, and 15 patients with thalassemia major (6 males, 5 females, 4 not-informed, age 7 ± 3.5) from the day-care unit at the Yangon Children's Hospital. All examinations were performed with the consent of patients or caretakers.

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Table I Summary of hepatitis virus markers

aHBc Ab	HBs Ag	aHCV Ab	Number of patients		
			Hepatology	Haematology	Children's
+	+	+	6(2)	2	0
+	−	+	33(6)	5	4
+	+	−	30(13)	0	2
+	−	−	25(5)	5	1
−	−	+	1(0)	3	3
−	−	−	7(2)	3	5
Total			102(28)	18	15

aHBc, antibody to hepatitis B core antigen; HBsAg, hepatitis B surface antigen; aHCV, antibody to hepatitis C virus; Hapatology, from the Hapatology Department of the Yangon General Hospital; Haematology, from the Haematology Department of the Yangon General Hospital; Children's, from the Yangon Children's Hospital; ( ), the number of patients with hepatocellular carcinoma.

Table 1 shows the results of tests using hepatitis virus markers. Among the hepatology patients, 92% showed positive to anti-hepatitis B core antigen (anti-HBc, Dinabot, Tokyo), and 35% showed hepatitis B surface antigen (HBs Ag, International Reagents Corp., Kobe) positive. Among patients showing positive anti-HCV by ELISA (Ortho Diagnostic Systems, Tokyo), 79% were thought to have clinical or subclinical hepatitis C, since HCV RNA by the polymerase chain reaction showed positive in 19 of 24 anti-HCV positive patients tested.

Among 28 patients with hepatocellular carcinoma (HCC), 13 (46%) had hepatitis B, 6 (21.4%) were both anti-HCV and anti-HBc positive, and 2 (7%) showed both HBsAg and anti-HCV positive.

The history of HCV infection among recipients of blood transfusions at the Haematology Department, the Yangon General Hospital, and at the Children's Hospital was found to be 55.5% and 46.7%, respectively, which is comparable to the history of hepatitis B infection (66.7 % and 46.7%, respectively).

This preliminary survey also showed 2 positive cases for anti-HCV among 34 voluntary blood donors.

Iron metabolism was abnormal in two thirds of the patients. Low TIBC (total iron binding capacity) as well as hyperferritinemia were commonly observed. The relationship between the early onset of HCC and iron overload must be further investigated. Suspected sources of HCV transmission are transfused blood not screened for HCV and other iatrogenic sources, as well as the practice of tattooing. As there is no effective treatment for hepatitis C in this country, a screening program for transfusion-blood should be started immediately.

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