

## Control of Hepatitis C in Iran: Vision and Missions

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Chronic hepatitis C is a slowly progressive disease of the liver caused by the hepatitis C virus (HCV) and after hepatitis B infection is the second common cause of end-stage liver disease in Iran and many countries (1). However, according to the more common routes of transmission for HCV such as intravenous drug abuse and needle-sharing in Iran, research on HCV is more important than HBV (2). Also, the patients receiving maintenance transfusion such as thalassemic patients, hemophilic patients and patients with chronic renal failure (CRF) are at risk for HCV acquisition (1, 3, 4).

Recent official report of Management of Special Disease and Transplantation Center (MSDT) demonstrated that the prevalence of HCV infection among patients on hemodialysis in the whole country has decreased from 14.4% in 1999 to 4.5% in 2005 (5-7). Various reasons might be responsible for this reduction such as blood screening, development of technology in Iran regarding produce of domestic erythropoietin which has been resulted in decreasing transfusion, and early transplantation (1, 8). We are going to design and implement an online network to link the dialysis centers across the country. The unique training of the hemodialysis staffs and acquiring the standard condition for hospitalization of patients with CRF can decrease the burden of disease in CRF patients. For example, PDferon alpha (3 times/week) as monotherapy will clear the virus load at least 50 percent and will decrease the incidence rate of HCV in CRF patients (9).

Nowadays, intravenous drug abusers with an incidence around 50-100% of anti-HCV positive subjects all over the world not only have the highest prevalence of HCV infection but also constitute a

potential reservoir of HCV in the community. Many studies in Iran are reported, the intravenous drug users (IDUs) had HCV infection between 38% and 47% (10). Triangular clinics are the best practice for prevention and care for IDUs, which has been started in Kermanshah in 2000 as a pilot study. The main concept in triangular clinics is addressing IDUs through a harm reduction approach then we expanded our activities in harm reduction programs in the country by more methadone treatment clinics. We tripled our centers and our coverage to enroll more patients in the country and focused on behavior disease in IUDs and organized a comprehensive and integrated service to these patients. Harm reduction as the core activity of triangular clinics serves the infected ones well while other supportive services help healthy but at risk population prevent the spread of HIV, HCV and other related ailments. We hope the already-in-place program of harm reduction gets national to cover all high-risk populations including IDUs in and out of prison (11).

Patients with hemophilia constitute a high-risk group for acquisition of HCV infection. Transmission of HCV via blood products has been a significant source of hepatitis C infection for patients with hemophilia. The prevalence of HCV infection in Iranian hemophilic patients is from 15.6% in Fars, a southern district of Iran to 76.7% in North-West of Iran in different studies (12, 13). Iranian thalassemic patients have the prevalence rate of HCV infection between 15.7 and 63.8 percent. In our experience on thalassemic patients in Tehran, 24.2% of them were anti-HCV positive. HCV seropositivity was significantly associated with longer history of transfusion, but patients who had

received their first blood transfusion after implementation of compulsory blood donors screening in Iran in 1995, had a significantly lower rate of HCV infection compared to those transfused after then (1, 2).

By the way, we started screening all of hemophiliac and thalassemic patients and enroll them into a treatment program through a global network in our country. At first step, we proposed to include 400 hemophilic and 300 thalassemic patients with HCV infections and treat them with pegylated interferon alpha (PEGASYS) alone or in combination with ribavirin, during winter 2006 to 2007. Fortunately until now, most of the patients tolerated the drugs and we hope to decrease at least 50% burden of disease in these groups. We hope that, more relations and communications between Iranian Blood Transfusion Organization (IBTO) and research centers and better screening tests for detection of HCV in blood donors will improve the safety of blood products; therefore we will achieve better prevention and control of hepatitis C in our country, only in the time to come.

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