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Past Illegal Blood Donation in China Linked to Hepatitis C Virus Infection

Research in a rural province of central China has documented that illegal blood donation practices led to high hepatitis C virus (HCV) infection rates in blood and plasma donors during the 1980s and early 1990s, and that failure to screen for HCV in transfusion recipients increased their risk of infection as well, according to an article in the November 15 issue of *The Journal of Infectious Diseases*, now available online.

Some blood donation facilities in rural China illegally pooled blood and reinfused compatible red blood cells to permit more frequent donations. Although government action has markedly curtailed such practices since the late 1990s, blood collection and banking methods in such settings still need to be monitored and improved, the article noted.

Researchers from the United States and China, including Han-zhu Qian, MD,

PhD, of the University of Alabama at Birmingham, conducted a survey in 2003 among a random sample of 538 adult residents from 12 former commercial plasma-donating villages in Shanxi Province. Structured questionnaires were administered and blood samples tested for HCV antibodies. HCV rates were 8% in all participants, 28% in former plasma/blood donors, and about 3% in non-donors. Selling blood or plasma was the strongest independent predictor for HCV-positive findings. Receiving a blood transfusion was also independently associated with HCV; villagers who received blood transfusion had about 8 times the risk of HCV infection than those who had no history of blood transfusion.

Among the 538 villagers, 22 percent had a history of selling blood or plasma; from village to village, the rates ranged from 9 percent to 49 percent. The most common reasons for the practice were a need for money and being talked into it by other people. Villagers began to sell blood as early as in 1973 and as late as 1998; the main reasons for stopping were improved economic status, concern about health effects of blood drawing, abnormal liver function tests or hepatitis, and shut-down of the illegal blood center.

The investigators concluded that unhygienic plasma donation and receipt of blood transfusion are strong risk factors for HCV infection in rural central China, and that improved blood collection and blood banking practices remain an urgent health priority. "Technical support and drugs are needed to assist these central Chinese provinces cope with the care and treatment needs of HCV patients," the investigators added.

In an accompanying editorial, Roger Y. Dodd, PhD, of the American Red Cross noted that the study is "a snapshot of past events and should not be taken to define the present circumstances." Nevertheless, it illustrates that "short cuts, shoddy practice, pursuit of the bottom line, and lack of oversight can have devastating outcomes, not only for patients but also for donors."

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Founded in 1904, *The Journal of Infectious Diseases* is the premier publication in the Western Hemisphere for original research on the pathogenesis, diagnosis, and treatment of infectious diseases; on the microbes that cause

them; and on disorders of host immune mechanisms. Articles in *JID* include research results from microbiology, immunology, epidemiology, and related disciplines. *JID* is published under the auspices of the Infectious Diseases Society of America (IDSA). Based in Alexandria, Va., IDSA is a professional society representing about 8,000 physicians and scientists who specialize in infectious diseases. For more information, visit www.idsociety.org.
