



Hepatitis C HCCAP

Chronic Hepatitis B and C in China

Tina M. St. John, M.D.

Originally published in Hepatitis Magazine, Spring 2002. Reprinted with permission.



The People's Republic of China has more people with chronic hepatitis B and C than any other country in the world. There are currently approximately 130 million Chinese citizens with chronic hepatitis B, and 45 million people with chronic hepatitis C.

In November 2001, I had the privilege of traveling to China with a public health exchange delegation. During my trip, I learned about and discussed the problems and approaches to the chronic hepatitis B and C problems with Chinese doctors and public health professionals. In this article, I share some of my observations about how the Chinese approach and manage chronic hepatitis B and C.

Background Information

One cannot consider any public health problem in China without also taking into consideration some background facts. Although China is only slightly larger than the United States in terms of

area, there are nearly five times as many people in China as there are in the United States. The large number of people creates many problems for the public health system.

The most obvious problem is having enough facilities and health care providers to care for this enormous population. In the cities, there are large numbers of hospitals and health care clinics. But in the rural areas, where 80% of the Chinese people live, there are very few health care facilities. Many people in the rural areas of China are treated by so-called, "barefoot doctors." Barefoot doctors have no formal medical training. They gain their knowledge from their elders who in turn learned from their ancestors. Barefoot doctors primarily provide herbal therapies that have been used by the Chinese for thousands of years. Few of the modern medicines or facilities that we Americans are used to are available in these remote areas of China.

Another problem the Chinese face when it comes to health care is the cost. Until 1994, nearly all Chinese people received free medical care provided by the government. However, a growing population and rising medical costs made it impossible for the Chinese government to continue to provide free medical services. Therefore, in 1994, China instituted a new medical insurance system. Chinese workers and employers are required to pay into the new system. Like many medical insurance systems in the United States, all medical services involve a co-payment. The amount of the co-payment varies depending upon the type of medical

services one receives. A co-payment is also required for all medicines and herbal therapies. Most of the Chinese people are poor. Many cannot afford the co-payment amounts, which limits their access to medical care.

Despite the new insurance system, the Chinese government still bears most of the medical costs for the Chinese people. With the large number of people to be cared for, the government often cannot afford expensive medical treatments that may be common-place in many western countries.

When visiting China, it quickly becomes apparent there are two very different ways of life in China. The large cities in China now resemble any modern city, complete with skylines filled with beautiful, high-rise buildings, and highways clogged with traffic jams. The large hospitals in these urban areas have equipment and facilities similar to any large hospital in the United States. However, approximately 80% of the Chinese people live in rural areas. These areas often very remote with little access to the modern conveniences that are commonplace in Chinese cities. Many rural people do not have indoor plumbing, or a steady supply of clean water to drink. Travel into and out of these areas can be difficult because of weather and road conditions. There are frequently shortages of medicines and basic medical equipment such as clean needles. Access to emergency medical care is often not possible.



The Prevalence of Chronic Hepatitis B and C

It is estimated that 3.8% of the Chinese population is chronically infected with the hepatitis C virus compared to approximately 1.4% of the U.S. population. This translates into at least 45 million Chinese people chronically infected with HCV, compared to roughly 4 million people in the U.S. Considering the massive numbers of people infected, I went to China expecting chronic hepatitis C to be a major public health priority. However, after meeting and talking with my Chinese colleagues, I quickly came to understand that there are many other pressing public health priorities in China.

One of these health priorities is chronic hepatitis B. It is believed that an extraordinary 10.3% of the Chinese population is chronically infected with HBV, compared to <0.5% of the U.S. population. This means that there are roughly three times as many Chinese people with chronic HBV (an estimated 130 million) as there are people with chronic HCV. Therefore, the situation and relative importance of chronic HBV and HCV in China is basically the reverse of the situation in the U.S.

The health concerns associated with large numbers of people suffering from chronic viral hepatitis are much the same for China as they are for the U.S. Chronic HBV and HCV are both associated with two major risks: cirrhosis and hepatocellular carcinoma. Most experts believe that for both HBV and HCV, the time from infection to the development of cirrhosis is around 20-30 years. However, there is an important difference in how often these severe complications are observed in China and the U.S. It is believed that most Americans become infected with HCV sometime in early to middle adulthood. However, most experts believe the majority of Chinese people with chronic HBV were infected at or near the time of birth, or in childhood. In general then, most Chinese people tend to become infected earlier in life with HBV than most Americans become infected with HCV.

This means Chinese people with HBV tend to experience cirrhosis earlier in life, and have a longer period of time in which to develop hepatocellular carcinoma. The high prevalence of chronic HBV is largely responsible for the fact that liver cancer is the third most common cancer among the Chinese people.

Prevention Efforts

Since 1985, all Chinese infants are required to have hepatitis B immunizations. The compliance with this program has been outstanding in the urban areas. However, ensuring compliance in the more remote areas of China is much more difficult. Among the adult population, there is a focused effort to prevent mother-to-child HBV transmission. This effort begins with HBV screening of all expectant mothers. The Chinese Ministry of Health requires universal precautions in all health care facilities to prevent the transmission of blood-borne infections.

However, it was apparent to me during my visits to various hospitals and clinics that these precautions are not adhered to as strictly in China as they are in the U.S.

When I asked my Chinese colleagues about their HCV prevention efforts, I was told there are no organized efforts to educate people about the risk factors for becoming infected with HCV. However, as in the U.S., there are research efforts underway in China to develop a hepatitis C vaccine for primary prevention of the disease.

The safety of the blood supply in China is one area of viral hepatitis prevention that requires additional effort. In the United States, all blood banks are regulated by the Food and Drug Administration (FDA). One major purpose of the FDA's oversight is ensuring the safety of the blood supply. In China, there is no comparable organization regulating blood bank operations. As a result, the safety of the blood supply in some areas of China is questionable, particularly in remote, rural areas. Some of the problems with Chinese blood banks include: a lack of sterile

collection equipment, lack of testing equipment and supplies to screen blood for infectious diseases, and a general lack of knowledge about the risk of transmission of blood-borne diseases such as hepatitis B and C, and HIV. The Chinese Ministry of Health recognizes the importance of correcting these problems, and is working hard to do so. The Red Cross is working with the Chinese government to assist in these efforts.

Treatments

The Chinese medical system combines both western medicine (such as that practiced by most medical doctors in the U.S.) and traditional Chinese medicine (TCM). Although Chinese doctors advise patients regarding recommended treatments, the choice of what treatments to pursue is ultimately up to the individual patient. Following is a discussion of some of the more common treatment options used in China to treat chronic hepatitis B and C.

In larger cities and towns, patients with chronic hepatitis B who are candidates for drug therapy have the option of either interferon or lamivudine (Epivir-HBV[®]). The co-payments for these treatments are expensive, and are unaffordable for a significant number of patients. Most patients who choose drug therapy also use TCM. Herbs, acupuncture, and/or therapeutic massage are used to enhance the drug treatments, and to reduce side effects. The Chinese practitioners I spoke with firmly believe that the concurrent use of TCM and western drug therapy enhances the effectiveness of the drug therapy. However, they were unable to provide me with study data to support this belief.

A significant number of chronic HBV patients are not treated with drug therapy. This can be due to personal choice, a lack of money to pay for drug treatments, living in an area where there is no access to these treatments, or being unaware of the disease until it is late stage. Among people who are aware of their disease, TCM is often the treatment of choice. Since the TCM approach to

infectious hepatitis is the same whether the virus is HBV or HCV, I will discuss the TCM management of infectious hepatitis with the HCV treatment options.

At least half of people who are infected with HBV experience an acute illness. This acute illness can present an opportunity for the medical system to identify at least some of the people who may go on to be chronic carriers of HBV. However, because most people who are infected with HCV experience no acute symptoms, those who go on to develop chronic hepatitis often do so without being aware of their disease. In China, this situation is further complicated by the fact that there is very little testing of asymptomatic people to identify those who may have chronic HCV. As a result, most people with chronic HCV do not enter the Chinese medical system until they have late stage disease. Unlike in the U.S., patients in China who have significant fibrosis or early cirrhosis are not considered to be candidates for interferon-based therapy. These circumstances mean that currently, the majority of Chinese people with chronic HCV are not treated with the standard drug therapies that are used in the U.S. and most other developed countries.

The role of TCM for the treatment of chronic infectious hepatitis in China is well-established. Unlike western medical therapies which aim to eliminate or arrest the replication the causative virus, the goal of TCM is to limit the damage done by the virus. According to TCM principals, the primary problem is not the virus but rather a lack of balance in the body. Therefore, TCM works to restore balance. This is achieved by a variety of methods, either alone or in combination. The first level of TCM treatment is addressing life-style issues such as diet, exercise, stress, and sleep patterns. The second level of TCM therapy is the use of acupuncture to restore and enhance the energy flow of the body. The third level of TCM therapy is herbal treatments. The herbal treatments prescribed by a TCM

doctor are based on each patient's specific needs and situation. The herbal treatments used are adjusted over time, depending on the patient's changing condition. Some of the more commonly used herbs for the treatment of infectious hepatitis include: *Artemisia capillaris*, Cape Jasmine fruit, Chinese cork tree bark, dried ginger, large head *Atractylodes* rhizome, dandelion, and indigwood root.

Conclusions

China is facing an immense and complex problem dealing with the large numbers of its people suffering from chronic hepatitis B and C. The enormous population, the remoteness of many areas of the country, and an overtaxed medical system are obstacles that will need to be overcome to effectively combat this significant public health problem. However, the Chinese are resilient, stalwart, and creative people. I came away from my visits with my Chinese colleagues with a sense of optimism. I am convinced that working together, our collective knowledge, ingenuity, and persistence will ultimately lead to the alleviation of the global suffering caused by these difficult diseases.

Acknowledgements

I would like to thank the Hepatitis C Caring Ambassadors Program for their generous sponsorship of my trip to the People's Republic of China. I am also grateful to Dr. Qingcai Zhang for his assistance in obtaining epidemiologic data about HBV, HCV, and liver cancer in China.