Abstract

Chronic viral hepatitis is an important health problem in Taiwan. Chronic hepatitis B virus infection is the main cause. Among the hepatitis B carriers, about 60% patients remain healthy and asymptomatic, even to the end of their life. In contrast, some of the other carriers developed bouts of hepatitis activity, progressed to liver cirrhosis at different speed, and eventually some into liver cancer or other end-stage liver diseases. To effectively control this virus infection, a mass vaccination program was launched since 1984. Till now, the HBsAg carriage rate in children and adolescents drops dramatically. However, there are still around 3 million HBV carriers at risk of progression into advanced liver disease in Taiwan and waiting to be treated. Chronic hepatitis C virus infection is the second most common cause of chronic liver disease in Taiwan. For hepatitis C infection, around 20-30 % completely recover from acute infection but around 70%~80% become persistently infected. Among the chronic infected patients, 20-30% are at risk of progression into end-stage liver diseases and liver cancer. Unfortunately, effective prophylactic vaccine is still not available.

For hepatitis B and C treatment, there are now interferon and nucleoside analogs (lamivudine, ribavirin and adefovir). These specific treatments represent a great advancement in treating chronic hepatitis patients. Clinical studies have indicated that around 20-65% of the treated patients respond and their hepatitis is either controlled or even eradicated. Accordingly, many physicians practice these antiviral therapies almost daily. However, these treatments carry significant side effects and also very expensive.

Although previous studies clearly demonstrated that in those who successfully controlled or eradicated the virus, the risk of progression into liver cirrhosis or developing hepatocellular carcinoma decreased, the data were mostly derived from clinical trials. Whether similar benefit could be obtained in the general chronic viral hepatitis patients remains to be examined. From another aspect, the case number studied and follow-up period was still limited.

Taking advantage of the reimbursement program from the Bureau of National Health Insurance to treat chronic hepatitis B and C, we investigated the treatment efficacy of this National treatment plan. To date, there were 10299 chronic hepatitis B patients and 6048 chronic hepatitis C patients under treatments and among them, 1077 hepatitis B and 2600 hepatitis C patients had finished the treatment course and 6 month follow-up. Using loss of HBeAg and HBeAg seroconversion as evaluation endpoint for those with HBeAg, we found around 50% rate of losing HBeAg and 35% HBeAg seroconversion among those

hepatitis B patients treating with Lamivudine. For hepatitis B patients treating with interferon, the percentage of HBeAg loss was 31% to 39% with HBeAg seroconversion rate of 18% to 22%, depending on their pretreatment ALT levels. Among hepatitis C patients using Peginterferon with ribavirin, there were about 60% of them whose ALT levels returned to normal at end of treatment as well as end of follow-up. Approximately 50% of them remained normal at both tests (sustained biochemical response). As to those were treated with interferon with ribavirin hepatitis C patients, the biochemical response rate was similar (65%) and the sustained effect were seen on 53% of these patients. This large population study showed similar treatment efficacy to various smaller scale clinical trials. In the future, through linking to the cancer and mortality registry data bank in the Department of Health every 5 years, we will also study the long-term impact of antiviral therapy on the development of hepatocellular carcinoma and on the reduction of liver-related death in Taiwan.

Key word: hepatitis B, hepatitis C, treatment, efficacy, reimbursement