A CONSENSUS PAPER ON THE PUBLIC HEALTH SIGNIFICANCE OF HEPATITIS C INFECTION IN HONG KONG

Background

1. Over the last years, the Scientific Working Group on Viral Hepatitis Prevention has been monitoring the pattern of viral hepatitis and evaluating new information on its prevention and control. The SWGVHP discussed the public health significance of viral hepatitis at its meetings on 20 January 1999 and 20 May 1999. These constituted a followup to the Department of Health's Public Health Report[1] published in 1998. The following consensus is that of the SWGVHP.

Hepatitis C Virus and Natural History

2. The natural history of hepatitis C is derived from overseas studies. Hepatitis C virus (HCV), an RNA virus, is transmitted parenterally through exchange of body fluids. The risk of perinatal infection is present but small[2]. HCV viraemia is detectable within 1 to 3 weeks post-exposure. A majority of the infection remains clinically asymptomatic. Anti-HCV is detectable in 90% of patients 3 months after infection. Fifteen percent of the infected may clear the virus and have their liver function returning to normal, while anti-HCV remains detectable in the long term[3].

3. In the chronically infected, normal liver function is found in 30%-40%[4]. Signs and symptoms are generally absent or mild in the first twenty years of infection, with 20% progressing to cirrhosis.

Surveillance of Hepatitis C

4. Public health surveillance is defined as the process of systematic collection, orderly consolidation and evaluation of pertinent data with prompt dissemination of the results to those who need to know, particularly those who are in the position to take action[5]. Currently there are shortcomings in the public health surveillance of viral hepatitis.

5. Under the Quarantine and Prevention of Disease Ordinance (Cap. 141) and its subsidiary legislations, acute viral hepatitis is a statutory notifiable condition. The Department of Health does not, however, distinguish hepatitis C from other aetiological causes of hepatitis in its subsequent reports.

6. Limited epidemiological information on hepatitis C can be derived from other sources: (a) microbiology laboratories in the public service, which test clinical specimen for the virus, (b) Hong Kong Red Cross Blood Transfusion Service, which screens all donors for hepatitis C and (c) academic units, where related studies are conducted.

Epidemiology in Hong Kong

7. In Hong Kong, epidemiological information on hepatitis C is incomplete. The positive rate in new blood donors varied between 0.05% and 0.1% from 1991 through 1999. Of the 8000 tests performed in the Government Virus Laboratory each year, about 7.5% were positive. This level has been rather stable in the last years. The prevalence in injecting drug users was high at about 75%. Genotype 1b (60.6%) and 6a (26.8%) were the commonest in the local population[6].

8. The disease burden of hepatitis C has not been well-defined. There is no official morbidity or mortality data on hepatitis C in Hong Kong. According to the 1998 statistics, 1336 deaths were due to malignant neoplasm of liver and intrahepatic ducts and 418 due to chronic liver diseases and cirrhosis[7]. Given the 50-100-fold higher hepatitis B carrier rate in new blood donors, it is unlikely that hepatitis C accounts for a great proportion of morbidity related to liver disease. In a study of 424 patients with hepatocellular carcinoma, 7% were positive for hepatitis C[8].

Intervention Programmes relating to Hepatitis C

9. Unlike hepatitis A and B, there are currently minimal designated intervention programmes on the prevention of hepatitis C. These are integrated in existing programmes on bloodborne diseases and/or viral hepatitis in general.

10. Some notable programmes contributing to the primary prevention of hepatitis C are (a) donor deferral, hepatitis C screening and a look-back mechanism at the Hong Kong Red Cross Blood Transfusion Service, (b) infection control practice in health care settings, (c) prevention activities on blood-borne infections, including that of HIV infection, notably those targeting vulnerable communities, for example, injecting drug users.

11. Secondary prevention refers to medical treatment services. These are offered by specialty clinics that work on viral hepatitis.

Towards Better Understanding of the Impacts of Hepatitis C

12. The body of knowledge on hepatitis C in Hong Kong is limited. There is an urgent need to strengthen or expand the existing surveillance mechanism, so as to improve the understanding of the infection in the Hong Kong context.

13. It is unlikely that the reporting system operative under the Department of Health could contribute to an enhanced understanding of hepatitis C epidemiology. Consideration should be made for the establishment of (a) a parallel system to collect seroprevalence data and (b) a registry for improving the understanding of hepatitis C epidemiology, including its transmission, morbidity and mortality patterns.

14. The development of strategies for primary and secondary prevention of hepatitis C is important. This would, however, not be possible in the absence of a sustainable system for evaluating the epidemiology of the infection and an analysis of its impacts.

References

[1] Department of Health. *Public Health Report no.3. Viral hepatitis and liver cancer and unintentional injuries in children.* Hong Kong: Department of Health, 1998.

[2] Gibb DM, Goodall RL, Dunn DT, Healy M, Neave P, Cafferkey M et al. *Mother-to-child transmission of hepatitis C virus: evidence for preventable peripartum transmission.* Lancet 2000;356:904-7.

[3] National Institutes of Health. *Management of Hepatitis C.* NIH Consensus Statement 1997.

[4] Alter M, Margolis HS, Krawczynski Km Judson FN, Mares A, Alexander WJ et al. *The natural history community-acquired hepatitis C in the United Strates.* New Engl J Med 1992;327:1899-1905)

[5] World Health Organization. *WHO recommended surveillance standards (second edition).* Geneva: WHO, 1999.

[6] Prescott LE, Yap P-L, Simmonds P, Lai CL, Chan NK, Lin CK. *Genotype distribution in Hong Kong: sequence analysis and evaluation of different typing methods.* IX Triennial International Symposium on Viral Hepatitis and Liver Diseases. 21-25 April 1996, Rome, Italy [abstract B166]

[7] Department of Health. *Annual Report 1998/99.* Hong Kong: Department of Health, 2000.

[8] Leung NWY, Tam JS, Lai JY et al. *Does hepatitis C virus infection contribute to hepatocellular carcinoma in Hong Kong?* Cancer 1992;70:40-44