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Hepatitis C: Issues from the Southeast Asian Perspectives

W C Chow

While hepatitis C infection is generally considered more as a public health problem in the West, with hepatitis B infection dominating the public health scene in the East (with the exception of Japan), there is still a significant proportion of the population in some Asian countries afflicted by hepatitis C infection. In certain countries such as the Philippines⁽²⁾, Thailand^(3,4) and China⁽⁵⁾, the prevalence of hepatitis C among blood donors and in the general population may be even higher than that in the USA⁽⁶⁾. In addition, hepatitis C in these areas is associated with specific problems which may not be adequately addressed by the Western consensus on management of chronic hepatitis C.

In recent years, new hepatitis C virus (HCV) genotypes were described and found to be present exclusively in this part of the world, namely Hong Kong, Southern China, Thailand, Vietnam and Indonesia, only. They are genotypes 6-11⁽⁷⁾. On the other hand, most studies on treatment of chronic hepatitis C were carried out in the West and Japan where HCV genotype 1 predominates. Hence, the outcome of these studies and, based on which, the treatment guidelines recommended by the Western-held consensus meeting may not be relevant or applicable to some of our patients. This is why locally initiated therapeutic clinical studies are necessary to verify the efficacy of these western-initiated therapeutic recommendations in our own population. Further fine-tuning of therapeutic regimens based on local predominant genotypes may be required.

The other major therapeutic problem in Southeast Asian countries is the cost involved in treatment. Combination treatment using interferon and ribavirin has become the newly accepted standard for first line treatment of chronic hepatitis C, promising a higher sustained response rate. Unfortunately, it also means that the treatment of chronic hepatitis C which was already costly, has become unaffordable to some of these patients. Hence, it is only logical for these countries to put more effort in primary prevention.

Although the risk of vertical transmission of hepatitis B from a HBeAg positive mother to a child is much higher than that of hepatitis C (90%⁽⁸⁾ vs. 5%⁽⁹⁾), the seroprevalence rate of hepatitis B in the general population is progressively reduced in some of the Southeast Asian countries, such as Singapore and Taiwan, after the introduction of a mass hepatitis B vaccination programme for the newborns. Unfortunately, there is no equivalent hepatitis C vaccine available at this juncture. Consequently, we can only aim at minimising the risk of HCV transmission.

Rendering anti-HCV positive mothers aviraemic for HCV RNA or offering anti-retroviral therapy to mothers who have concomitant HIV infection can obviate or reduce, respectively, the risk of vertical transmission

Cover Picture:
 Left retrograde pyelogram shows the left ureter crossing the midline at the sacral region to the right side. There is hydronephrosis in the malrotated ectopic left kidney, due to stone obstruction, and upper ureteric stones. (Refer to page 139-141)



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of HCV infection from mothers to infants. Unfortunately, such therapeutic measures for the mothers will, once again, incur significant medical cost.

As for horizontal transmission of HCV infection, like the west, intravenous drug users form an important reservoir for HCV in some of our regional communities. The other perpetuating source of HCV infection comes from the patients with end-stage renal failure undergoing haemodialysis – they probably form the largest group of hepatitis C patients that we see in the public hospitals in Singapore. Furthermore, in certain less privileged communities in our region where ideal healthcare service is still lacking, nosocomial transmission due to suboptimal disinfecting procedures and reuse of needles may be the cause of HCV transmission. Other routes of transmission of HCV are related to local cultural practices. Certain folk practices, including acupuncture, *suidama*, tattooing, etc, are still being carried out in some of the Southeast Asian communities, encouraging the spread of the infection. Public health policies and education should be implemented in order to resolve some of these more fundamental problems at its source. This should be done at the community or national level, perhaps with the help of international health agencies.

Lastly, in the background of high prevalence of hepatitis B infection which is already contributing to a high incidence of hepatoma in this part of the world (not uncommonly affecting the relatively young cohort of the population), HCV should not be considered as just yet another unrelated infective agent to be added to our already long list of endemic infections which present in our community. Due to the similar route of transmission of infection of these two viruses, and the various epidemiological reasons that I have mentioned above, it is not surprising to find patients suffering from hepatitis B and C co-infection. While it is still controversial, there is evidence that suggests potential synergism of the carcinogenic effects of these two viruses⁽¹⁰⁾. Thus, it is likely that we will still see a high incidence of viral hepatitis-related hepatoma if we restrict our efforts on control of hepatitis B infection only and neglect the control of HCV infection, albeit a problem of a relatively smaller magnitude in our community.

In conclusion, due to our unique geo-socio-epidemiological conditions, it is important that we examine our own data to better understand the disease pattern and problems of management of chronic hepatitis C in our own region. This will eventually help us to derive better and more appropriate management plan for our patients and community at large.

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ERRATUM

In the article "Rapid Prenatal Diagnosis of Chromosome Abnormalities". Authors: S Y Tan, W B Chan, W C Cheng, A Hagarty, K T Lim, R Quaife. Published in SMJ 2000 vol 41 issue 10: pages 493-497. Figs. 1(a)-(h) of this article which were previously printed in black and white, are now reproduced in colour below.

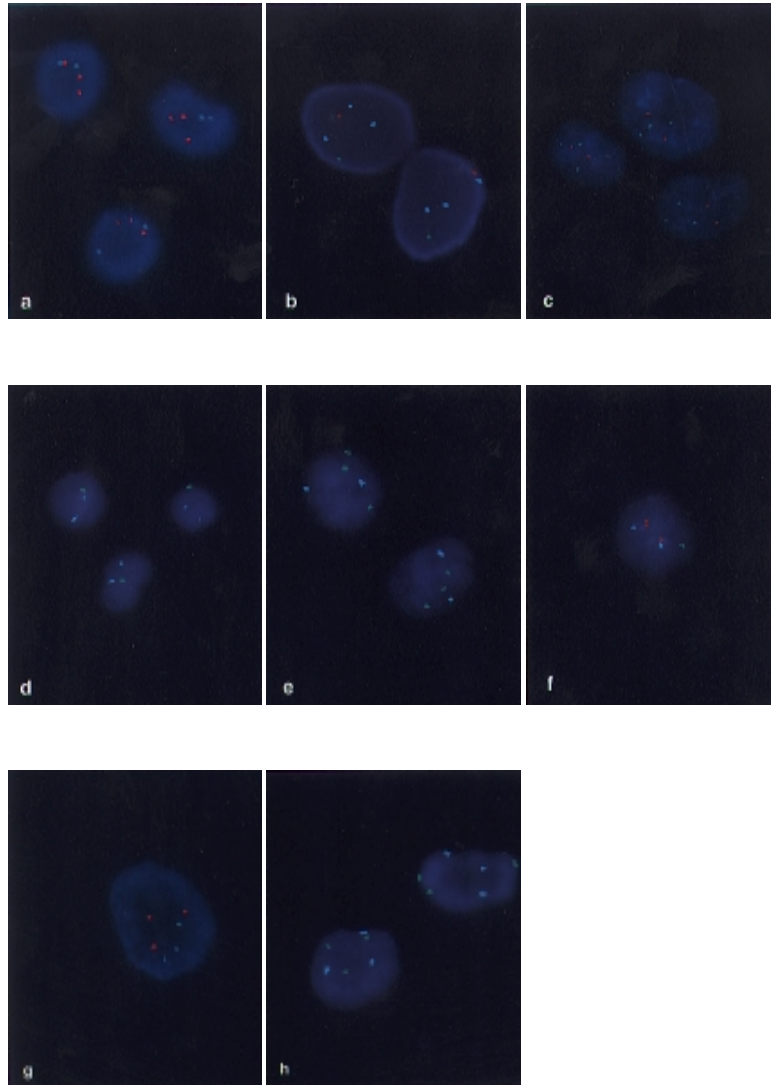
**Legends:**

Figure 1. a - c: Trisomy 21;18 and 13 indicated by three red; blue and green signals respectively. Since the 21 probe is applied with that of the 13, two green signals are seen with the three red for trisomy 21 (Down's Syndrome). Similarly, trisomy 18 (three blue) is seen with a red and green for the Y and X respectively, indicating a male Edward's foetus. Trisomy 13 (Patau's Syndrome) is demonstrated by three green signals and two red for a normal 21 complement.

d - f: Turner's Syndrome is indicated by only one X (green) signal with two 18 (blue) signals and no Y. Alternatively, three such green signals demonstrate a triple X female (with again two blue for chromosome 18). An XYY male has two red for the Y (instead of the normal situation of one) with one green for the X and again two blue for the 18.

g - h: Here all the probe signals are seen as three copies in the same cell. No Y signal was seen indicating a female triploid foetus (partial hydatidiform mole).