DISCUSSION ON HEPATITIS C

We write to clarify some of the points in the article, Hepatitis C: the invisible virus producing very visible problems[1].

First, on the point of vertical transmission. Although initial reports showed a relatively high rate of vertical transmission (from mother to child), more recent data indicate that vertical transmission under normal circumstances is uncommon, probably less than 3 per cent. Where the mother has concurrent infection with the human immunodeficiency virus (HIV), or suffers acute infection with the hepatitis C virus (HCV) during pregnancy, or has active liver disease (chronic active hepatitis) due to HCV infection, there is a greater risk of vertical transmission occurring. Breast-feeding is not thought to be a transmission route for HCV[2].

The Victorian study of injecting drug users referred to found 68 per cent of *current* IDUs were seropositive at entry to the study[3]. More important, it found a seroconversion rate of nearly 20 per cent a year in this group, indicating rapid and continuing spread despite the existence of harm reduction programs aimed at reducing the likelihood of spread of HIV. This high incidence is consistent with findings from several studies, including this one and a NSW study[4], that between 30 per cent and 40 per cent of IDUs have been exposed to HCV within two years of beginning to inject. Subsequently, we have observed an incidence rate of 38 per cent a year among male prison entrants with a history of IDU in Victoria in 1991-2[5]. These data suggest that efforts to reduce spread of blood-borne viruses among IDUs are not totally successful, and the very real possibility exists of further spread of HIV in some subgroups of IDUs.

The estimates of 80,000 current and former IDUs chronically infected with HCV come from the Victorian study quoted, and are based on the estimate of 50 per cent of people seropositive for HCV being chronically infected, as is quoted in your article[4]. In fact, the proportion seropositive who are chronically infected is now thought to be higher – in the order of 80 per cent or more. As well, several studies have shown that the current second generation screening assays are imperfectly sensitive compared with polymerase chain reaction (PCR), and may miss as many as 10 per cent of chronically infected people in some populations[6]. In the quoted Victorian study, 5 per cent (2/38) of the HCV seronegative IDUs were repeatedly PCR positive. On the basis of these data, we have substantially revised our estimates upwards, and suggest now that in the order of 130,000 Australians are chronically infected with HCV as a result of injecting drug use, and between 13,000 and 20,000 are becoming infected each year.

The article also notes that "the HCV is toxic to liver cells". The early pathogenesis data supported this view, but more recent evidence is providing support for an immunological effect as well.

The conclusion of the article, in relation to the cost-effectiveness of alpha interferon treatment for chronic HCV infection, has not taken into consideration the relatively low success rate of this therapy in curing HCV infection, and the absence of long-term data on the effect of such therapy.

In the editorial comment, you refer to a large group of people with unidentified risk factors for HCV infection. There is a potential implication here which must be avoided until there is supportive evidence, and that is that there are as yet unidentified modes of transmission of the virus. Good data on the distribution of risk factors for HCV infection do not yet exist in Australia, but there are indications that a substantial proportion of those with no identified risk factor have a remote or hidden history of IDU[8], which has not been discovered by conventional notification systems.

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4. Bell J, Batey RG, Farrell GC, et al. Hepatitis C virus in intravenous drug users. *Med J Aust* 1990; 153:274-276.
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AUTHOR'S REPLY

Clearly, given the problems associated with the second generation antibody tests and the very definite possibility that PCR results can be over interpreted, the question of vertical transmission remains unsettled in my mind.

John Dwyer

EDITORIAL COMMENT

The comments from both Crofts and Locarnini, and Dwyer, reflect the rapidly changing knowledge of hepatitis C, and the continued differing opinions held by people knowledgable in the field of hepatitis.