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**Hepatitis C virus transmission through sharing
hemodialysis machines**

Sir

I read with great interest the 'case of hepatitis C virus transmission acquired through sharing a haemodialysis machine' by Thomson *et al.* [1]. The authors suggest that current guidelines should be reviewed to encourage the use

of dedicated hemodialysis (HD) machines for hepatitis C virus (HCV)-positive patients, a suggestion that I strongly support.

It is well known that patients undergoing HD treatment are at an increased risk of contracting hepatitis C infection, and cross-infection between HD patients within centers has been well documented [2]. Implementation of infection-control policies and procedures have been shown to significantly reduce the risk of cross-infection between HD patients [3]. However, the nonadherence, inadequately applied and/or a breakdown in the infection-control policies and procedures remains a significant obstacle. This could be the result of lack or inadequate training and education of nursing staff and poor supervision of implementation of infection-control measures. The magnitude of increasing seroconversion may also be exacerbated by shortage or frequent turnover of nursing staff in dialysis units. These often faced practice difficulties, increasing demands on HD service, expensive and side effects of management of hepatitis C infection and the absence of hepatitis C vaccine are all in favor of isolating hepatitis C-infected HD patients and the use of dedicated HD machines [4].

In 1995, Abu-Aisha *et al.* [5] reported, in a prospective study, about the effect of chemical and heat disinfection of HD machines on the spread of HCV infection. Following the seroconversion of 28% of HD patients in first 12 months and 32.2% in the following 18 months, and in the absence of other sources of infection with HCV, they concluded that HD machines were the most likely source of transmission of HCV infection, and therefore, it was important to assign specific HD machines for anti-HCV-positive patients. Similar conclusions have also been reported by other studies (reviewed in ref. [4]).

We have previously investigated the influence of isolation of patients with different viral serology status on the transmission of viral hepatitis among patients on HD. Our kidney center was designed to facilitate isolation of infected patients and implement infection-control precautions. These include separate rooms and designated HD machines for patients with hepatitis B, hepatitis C and seronegative patients. Our follow-up results showed that there was a significant decrease in the annual incidence of hepatitis C seroconversion from an average of 2.4% between the years 1998 and 2001 to 0.2% between 2002 and 2003, with no new seroconverted cases been reported since 2004 [6]. Our results showed that isolation of patients and HD machines, together with strict adherence to infection-control policies and procedures, result in a significant decline in the incidence and better control of viral hepatitis transmission among HD patients.

Editorial Note: Dr Thomson *et al.* had no further comments on this letter.

Conflict of interest statement. None declared.

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