Prevalence of Hepatitis C Viral Antibodies in Blood Donors, Pregnant Women and Haemodialysis Patients in the Eastern Province of Saudi Arabia: A Preliminary Study

Sir,

For a 1-year period (December 1990 to November 1991) 811 subjects were studied for anti-HCV among blood donors, pregnant women and end-stage renal disease patients under haemodialysis programmes. All subjects were residing in the Eastern Province, and we used the Abbott's HCV EIA (c 100-3) kits for this assay (the then available test). As seen in Table 1, the overall prevalence rate among blood donors was 3.3%, while the rates per nationality were 1.7%, 1.5%, 1.9% among Saudi, Filipino, and Indian donors respectively. These figures match those four previous Saudi studies in the Central Province, that varied between 0.5% and 1.5%.2,4 From our findings we can conclude that there is a large number of asymptomatic carriers of HCV in the Eastern Province, that could possibly progress to chronic hepatitis, cirrhosis and/or hepatocellular carcinoma.4 A very high prevalence rate was seen among Egyptian blood donors namely 15.8% (12 of 76). This figure agrees with Saeed et al. in Riyadh who gave 19.2%.5 This HCV infection among Egyptians had been discussed by one of us (SEF) recently,6 however, it needs more detailed research in the future. Also a very strikingly high rate was seen among haemodialysis patients (46.5%, 54 of 116) which matches a similar study in the Riyadh area (53.7%).3 This high prevalence rate reflects the risk of repeated transfusions of non-HCV screened blood to this group of patients, and raises the possibility of cross-infection through the haemodialysis units.

Table 1 shows that concurrent infection of both HCV and hepatitis B virus was evident in 13.6% of the blood donors, while in a similar study in Riyadh it was 9.1%.4 This could be explained by the fact that the mode and route of infection of both viruses are more or less similar, though there is still considerable debate about HCV transmission.

In this limited study, the absence of a single case of HCV among pregnant women may be due to the very limited number of our sample (28 women only), though in one study in the UK, zero level was also reported among 40 pregnant women;10 however, this group of patients needs more studies.

Table 1
Prevalence of anti-HCV among blood donors

<table>
<thead>
<tr>
<th>Nationality</th>
<th>No. tested</th>
<th>No. positive (%)</th>
</tr>
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<tbody>
<tr>
<td>Saudi</td>
<td>475</td>
<td>8 (1.7)</td>
</tr>
<tr>
<td>Egyptian</td>
<td>76</td>
<td>12 (15.8)</td>
</tr>
<tr>
<td>Filipino</td>
<td>64</td>
<td>1 (1.5)</td>
</tr>
<tr>
<td>Indian</td>
<td>52</td>
<td>1 (1.9)</td>
</tr>
<tr>
<td>Total</td>
<td>667</td>
<td>22 (3.3)</td>
</tr>
</tbody>
</table>

Table 2
Comparison between hepatitis B virus markers and ALT in positive and negative anti-HCV blood donors

<table>
<thead>
<tr>
<th>Anti-HCV status</th>
<th>HBeAg +ve Anti-HBe ALT elevated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (%)</td>
</tr>
<tr>
<td>Positive</td>
<td>22</td>
</tr>
<tr>
<td>Negative</td>
<td>645</td>
</tr>
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</table>

ALT: alanine aminotransferase.

As seen in Table 2, we tried to check the efficiency of HCV surrogate markers (anti-HBe and alanine aminotransferase (ALT) level). These two markers were positive in 63.7% and 15.6% among the anti-HCV positive and negative specimens respectively, which can explain some contradictory reports on the issue of correlation between the surrogate markers and the HCV positivity. The present limited study showed that these surrogate markers are not as helpful as expected. The authors of this letter, being aware of the limitation of the first generation test, are now preparing a broad study of HCV using the second generation test (c 100-3, c 22) and the third generation test (supplementary two bead test c 100-3, c 22 & c 33). These two newly introduced tests for HCV are more sensitive and specific than the current test. We expect this new study to appear in the Saudi Medical Journal very soon.

The authors would like to express their thanks to Mrs Priscilla Jimenez, Claire Galima and Marlin Regalado, medical technologists, Virology Department, Damman, for their technical help.

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References

Surgical Implications of Sickle Cell Anaemia

Sir.

With reference to the article ‘Surgical implications of sickle cell anaemia’,2 we note that the author has completely missed out cardiac diseases in patients with sickle cell anaemia. With