Hepatitis B and C viral infections among STD clinic patients in India

While many studies from other countries document hepatitis B virus (HBV) and hepatitis C virus (HCV) infection rates in STD clinic patients, very few data are available from India. In the present report, we have analysed the rate of HBV and HCV infections in STD patients by using serological and molecular methods of diagnosis.

The study subjects were symptomatic STD patients (n = 143), who attended the STD clinic, Government General Hospital, Chennai, between September 1998 and August 2000, randomly included for a study on STDs after obtaining informed consent. Blood samples were evaluated for hepatitis and HIV markers by ELISA kits; HBsAg, HBeAg/anti-HBe (Biorad laboratories, USA), anti-HCV (Murex Diagnostics, UK), anti-HIV 1 and 2 (Nyton Diagnostics, India). Anti-HIV positivity was confirmed by another EIA kit (Sanofi Pasteur, France). Detection of HBV DNA and HCV RNA was performed by polymerase chain reaction (PCR) and RT-PCR methods.

The serological and molecular marker profile for HBV and HCV is shown in table 1. HBsAg was positive in 37 (25.9%) patients, while HBV DNA was detected in 25 (67.6%) of them. HBV DNA was detected in 23 of 28 HBeAg positives and two of nine anti-HBe positive cases. The overall HBV positivity rate was significantly higher in females than in males (33.7% vs. 19.5%; p < 0.05). Anti-HCV was positive in six (4.2%) patients and five of them showed HCV-RNA positivity. The overall HCV prevalence was 5.6%. Anti-HIV positivity was seen in 24 (16.8%) patients. Men had a significantly higher HIV positivity rate compared to women (27% [17/63] vs. 8.8% [7/80]; p < 0.05). HIV co-infection was observed in five (13.5%) of the HBV infected patients and in two (25%) of the HCV positive patients in whom HCV RNA alone was positive.

There was a low prevalence of injection drug use (7.7%), history of blood transfusion (5.6%), and homosexual contact (2.9%) and these risk factors showed no correlation with HBV and HCV positivity. Having multiple sexual partners was a risk factor significantly associated with HBV and HCV positivity in men. Men who had multiple sexual partners (n = 35) had 14.3% HCV positivity and 17.1% HBsAg positivity, while in those who did not report multiple sexual contact, 8% had HBsAg positivity and none had HCV positivity.

The results of the present study suggest that STD clinic patients may be considered as a targeted high risk group for routine screening for HBV and HCV to control the high infection rates. HIV co-infection in HBV/HCV infected patients is a matter of concern to evolve better clinical management strategies. Our data emphasise the need for molecular diagnosis to prevent underdiagnosis of HCV infection in STD/HIV patients. The HBV positivity rate (26%) observed in the present series of STD patients is high compared to previous Indian reports.3,4 HBV vaccination in STD patients may be a much needed intervention to strengthen STD control programmes in India. Further large studies are required to assess the magnitude of HBV and HCV infections, role of sexual transmission, and associated risk factors in the STD population.

Table 1 Serological and molecular markers for HBV and HCV in STD clinic patients in relation to sex

<table>
<thead>
<tr>
<th>HBV and HCV markers</th>
<th>Males (n = 63)</th>
<th>Females (n = 80)</th>
<th>Both (n = 143)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBsAg positive (%)</td>
<td>10 (15.9)</td>
<td>27 (33.7)</td>
<td>37 (25.9)</td>
</tr>
<tr>
<td>HBeAg positive (%)</td>
<td>7 (11.1)</td>
<td>21 (26.3)</td>
<td>28 (19.4)</td>
</tr>
<tr>
<td>Anti-HBe positive (%)</td>
<td>3 (4.8)</td>
<td>6 (7.5)</td>
<td>9 (6.3)</td>
</tr>
<tr>
<td>HBV DNA positive (%)</td>
<td>6 (9.5)</td>
<td>19 (23.7)</td>
<td>25 (17.5)</td>
</tr>
<tr>
<td>Overall HBV positivity (%)</td>
<td>10 (15.9)</td>
<td>27 (33.7)</td>
<td>37 (25.9)</td>
</tr>
<tr>
<td>Overall HCV positivity (%)</td>
<td>5 (7.9)</td>
<td>3 (3.7)</td>
<td>8 (5.6)</td>
</tr>
</tbody>
</table>

In conclusion, the outcomes of this study provide insights into the spread of HBV and HCV infections in STD/HIV patients. The high prevalence of HBV and HCV infections in these risk groups, especially in males and females, highlights the need for targeted intervention to strengthen STD control programmes in India.

References

health coverage and preventive education on STIs and HIV/AIDS with no prejudice. Adhering to unfounded propaganda and denial of the social realities propagates the social ills with catastrophic public health consequences.

Correspondence to: M R Mohabibi, Tehran, Iran; mmohabibi@yahoo.com
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Clinically resistant trichomoniais

We read with interest the recent review on trichomoniais and would like to share our experience of a patient with clinically resistant infection, in whom various therapies were tried until we achieved a successful response.

A 39 year old Irish female factory worker presented in April 2001, complaining of a copious malodorous vaginal discharge associated with vulval soreness following unprotected sexual intercourse with a casual male partner 4 months previously. On examination the vulva and groin were erythematous and there was a profuse frothy yellow vaginal discharge with a pH >4.5. Microscopy revealed Trichomonas vaginalis and she was treated with a 5 day course of oral metronidazole 400 mg twice daily as per the UK national guidelines. Screening for chlamydia and gonorrhoea was negative.

Over the next 10 months, she re-attended a further eight times with persistent symptoms and on each occasion denied any sexual contact or non-compliance with treatment. After her third visit, a management strategy was implemented on the basis of a literature review with a named clinician. In total, she received two courses of oral metronidazole (one preceded by oral amoxicillin), three courses of metronidazole suppositories (used as pessaries), a single dose of tinidazole, and a course of acetasol and nonoxynol-9 pessaries. However, despite the planned treatments microscopy was reportedly positive. She even had her intrauterine device removed in case this contributed to the problem.

Finally, in February 2002, she was treated with oral metronidazole 400 mg three times daily and metronidazole pessaries 1 g daily for 2 weeks following the recommendations of another consultant colleague in the region. Her symptoms and on each occasion denied any possibility of re-infection, both of which were excluded. The use of extended courses of treatment has also been suggested in the management of other vaginal infections such as candidiasis and bacterial vaginosis. Certainly, in our patient this approach was required.

The distressing symptoms associated with clinically resistant trichomoniais cannot be underestimated and thus sharing anecdotal management experience is essential. Devising a treatment schedule and providing a named clinician to ensure continuity of care is invaluable for such patients. We would suggest that re-treating with a prolonged course of oral and vaginal metronidazole at an early stage can result in a favourable outcome and should be considered.

C E Cohen
St Stephen’s Centre, Chelsea and Westminster NHS Trust, London, UK

N M Desmond
The Garden Clinic, Upton Hospital, Slough, UK

Correspondence to: Dr Charlotte Cohen. St Stephen’s Centre, 2nd floor, Chelsea and Westminster Hospital, 369 Fulham Road, London SW10 9NH, UK; cem.cohen@hotmail.com
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References

Female sex workers and fear of stigmatisation

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