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Incidence of hepatitis C virus and HIV among new injecting drug users in London: prospective cohort study

Ali Judd, Matthew Hickman, Steve Jones, Tamara McDonald, John V Parry, Gerry V Stimson, Andrew J Hall

In England, the low prevalence of HIV among injecting drug users during the 1990s was attributed in part to the introduction of harm reduction interventions in the late 1980s. Also, the prevalence of hepatitis C virus in the late 1990s was thought to be relatively low compared with other countries, at around 40% overall and 15% among those who had been injecting drugs for less than six years. We carried out a prospective cohort study of new injecting drug users in London to estimate the incidence of hepatitis C virus and HIV.

Participants, methods, and results

In 2001, we recruited from community settings mainly in London, but also in Brighton, 428 injecting drug users who were aged below 30 years or had been injecting for less than four years and the median frequency of injecting was 2.5 times a day. Most (71%) mainly injected opioids, although just over half (53%) had injected cocaine or crack in the previous year.

In the previous four weeks with needles and syringes used by someone else, and 53% sharing injecting paraphernalia. The baseline prevalence of antibody to hepatitis C virus was 3.4 cases per 100 person years (see table). The overall follow up rate was 70%, and we found no difference between those followed up and those lost to follow up for sociodemographic characteristics or injecting risk behaviour. The incidence of antibody to hepatitis C virus was 4.1 cases per 100 person years and of antibody to HIV was 3.4 cases per 100 person years (see table).

Comment

The incidence of hepatitis C virus in England is high and of HIV higher than expected. These findings are corroborated by ongoing surveillance data, and suggest that transmission may have recently increased.

Possible explanations for the rising incidence include changes in patterns of injecting drug use, with greater injection of crack and injecting risk behaviour in newer injecting drug users than in those injecting in the early to mid-1990s. In addition there may have been increases in the size of the population of injecting drug users over and above any increase in protective interventions. Recent estimates suggest that current...
syringe distribution in London provides one new needle per injecting drug user every two days and that fewer than one in four are in drug treatment at any one time. Specific targets to prevent bloodborne viruses among injecting drug users have been absent from the UK government's drug strategy in the past five years, and there has been little targeted health education or prevention campaigns. Increasing the coverage of syringe exchange and provision of drug treatment is only part of the solution. Innovative strategies are required, specific to hepatitis C virus and to HIV, to change behaviour and to deliver health education messages and harm reduction strategies early enough to make a difference.

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# What is already known on this topic

Injecting drug users are at high risk of acquiring HIV, hepatitis C virus, and other bloodborne infections.

# What this study adds

The incidences of hepatitis C virus and HIV among new injecting drug users in London are 41.8 and 3.4 cases per 100 person years, respectively.

Current drug policy is failing to maintain historical levels of protection from bloodborne viruses among this high risk group.

# Table: Prevalence and incidence of hepatitis C virus and HIV antibody among new injecting drug users in London, 2001-3

<table>
<thead>
<tr>
<th>Viral antibodies</th>
<th>No positive/total</th>
<th>Prevalence (95% CI)</th>
<th>No of seroconversions/total (mean follow up time)</th>
<th>Incidence rate per 100 person years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis C virus</td>
<td>187/428</td>
<td>43.7 (38.9 to 48.5)</td>
<td>53/151 (372 days)</td>
<td>41.8 (31.9 to 54.7)</td>
</tr>
<tr>
<td>HIV</td>
<td>18/428</td>
<td>4.2 (2.5 to 6.6)</td>
<td>9/273 (360 days)</td>
<td>3.4 (1.8 to 6.6)</td>
</tr>
</tbody>
</table>

Contributors: AJ, MH, SJ, JP, GVS, and AJH designed and conducted the cohort study. TMcD conducted the laboratory testing, overseen by JVP. AJ undertook the statistical analysis; she is guarantor for the paper. All authors contributed to the writing of the paper.

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Competing interests: None declared.

Ethical approval: This study received ethical approval from Hammersmith, Queen Charlotte’s and Chelsea and Acton Hospitals research ethics committee.


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# Averting a change to the date of the royal succession

I will be 90 years old in 2005 and have a very clear memory of an episode which took place at my home in Mansfield in 1926 when I was 11. My father, H.L. Flint, was a general practitioner but was much involved with cardiology. We understood (rightly or wrongly) that he was the first person in the Midlands able to take electrocardiographs. One fair-sized room in our house was his surgery. (Panel patients had a scruffy place in the town.) The electrocardiograph took up nearly the whole length of one wall. The patient sat with both feet and arms in saline baths and was wired up to the machine. Moreover, wires were run through our house and garden, over a high wall, through a neighbour's garden, and so to the General Hospital, which stood high above us, to enable hospital patients to be wired up there, too.

At that time, the then Prince of Wales kept his hunters at Melton Mowbray (about 35 miles away). His vet was worried about the health of the Prince's favourite hunter, “Tarzan.” He had heard of my father and asked whether it would be possible to take an ECG of Tarzan. After consideration my father decided to have a try. In due course, the horse arrived with the vet, groom, and an equerry, in a large horsebox. When this was arranged, my mother promptly decided to go and stay with her mother, so we still have a try. In due course, the horse arrived with the vet, groom, and an equerry, in a large horsebox. When this was arranged, my mother promptly decided to go and stay with her mother, so we still have.