Global views

Ethnic and demographic variations in HIV/AIDS presentation at two London referral centres 1995–9

Introduction

Increasingly effective antiretroviral therapy provides a strong rationale for seeking early diagnosis in order to reduce morbidity and prolonged life expectancy. Relatively little is known about how access and disease stage at diagnosis varies by ethnic or demographic factors. These factors were examined in patients at two hospitals in south London.

Methods

The study population comprised all patients with newly diagnosed HIV/AIDS registered at St Thomas’s or Lewisham Hospitals between 1 July 1995 and 31 January 1999. Data from medical records was analysed using SPSS for Windows. Univariate analyses were conducted using \( \chi^2 \) tests. Multiple logistic regression was used to analyse predictor variables for (1) a depressed initial CD4+ count (\( <350 \times 10^3/l \)) and (2) an initial HIV/AIDS diagnosis. The models were adjusted for sex, age group, ethnicity, source of referral, and HIV risk factor. The CD4+ model was adjusted for initial HIV status and the HIV/AIDS status model for initial CD4+ count.

Results

The study population numbered 450; 50% were white (74% homosexual, 10% female); 38% were black African (99% heterosexual, 61% female). The proportion of black African patients rose from 30% in 1996 to 48% in 1998; 41% of black Africans were self referred, 11% were referred by a general practitioner, and 46% through a hospital department. The comparative figures for whites were 68%, 9%, and 18%. In the univariate analysis, source of referral (omitting antenatal clinic referrals) was related to ethnicity (\( p<0.001 \)), sex (\( p=0.002 \)), and risk factor (\( p<0.001 \)). Median CD4+ counts were: all cases 270 \( \times 10^3/l \); whites 340 \( \times 10^3/l \); black Africans 200 \( \times 10^3/l \). Multivariable analysis (see table 1) revealed that black Africans were 3.2 times more likely than whites to present with a CD4+ count \( <350 \) (OR=3.2, 95% CI: 1.9–5.2) and people over the age of 35 were 2.8 times more likely than younger people to present with a CD4+ count \( \leq 350 \) (OR=2.8, 95% CI: 1.6–5.0). As expected, an initial AIDS diagnosis was a significant predictor (\( p<0.001 \)). There were no significant interactions between the variables.

Twenty three per cent of patients presented with an initial AIDS diagnosis. This did not vary by ethnicity or risk factor; 33% of people aged over 35 presented with an AIDS diagnosis compared with 20% of younger people (\( p=0.002 \)). The only significant predictors of an initial AIDS diagnosis were source of referral (OR=2.6, 95% CI:1.2–5.7) and a depressed CD4+ count (OR=3.1, 95% CI:3.0–21.7).

Discussion

The recent marked increase in the proportion of black African patients presenting to these London clinics with newly diagnosed HIV may reflect increased numbers in the population, a greater willingness to seek testing, or a combination of the two. Black Africans show distinct patterns of referral and, together with older patients, are most likely to present with a significantly depressed CD4+ count. This study highlights the need to investigate reasons for ethnic and demographic differences in accessing HIV care in order to develop appropriate interventions to reduce delay. The high proportion of patients presenting with an AIDS defining illness indicates the need for continued efforts to encourage early testing across all groups.

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J SAUL
J ERWIN
Academic Department of Genitourinary Medicine, Guy’s, King’s and St Thomas’s Medical School, St Thomas’s Hospital, London SE1 7EH

J C BRUCE
Infectious Disease Epidemiology Unit, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT

B PETERS
Academic Department of Genitourinary Medicine, Guy’s, King’s and St Thomas’s Medical School, St Thomas’s Hospital, London SE1 7EH

Correspondence to: Dr J Erwin jero@emunds.demon.co.uk


Table 1  Effects of selected characteristics on initial CD4+ count (\( \leq 350 \) and \( >350 \)) and an initial HIV or AIDS diagnosis

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Multivariate adjusted OR</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial CD4+ count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age group</td>
<td>&gt;35</td>
<td>2.8 (1.6, 5.0)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Black African</td>
<td>3.2 (1.9, 5.2)</td>
</tr>
<tr>
<td>Initial diagnosis</td>
<td>AIDS</td>
<td>11.2 (4.3, 28.9)</td>
</tr>
<tr>
<td>Initial HIV or AIDS diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD4+ count</td>
<td>( \leq 350 )</td>
<td>8.1 (3.0, 21.7)</td>
</tr>
<tr>
<td>Source of referral</td>
<td>Outpatient</td>
<td>2.6 (1.2, 5.7)</td>
</tr>
<tr>
<td>Inpatient</td>
<td>17.4 (7.8, 38.8)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

n=376; OR=odds ratio.
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