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The rising prevalence of HIV-1 infection in patients attending an inner city accident and emergency department

Mark C Poznansky, Jon Walters, Alistair Cruikshank, Robin Pollock, Peter Dendrowskyj, Kim Lewis, John V Parry, Jane Fothergill, Jonathan Weber

The recently published findings of the unlinked anonymous HIV prevalence study in England and Wales showed unchanging HIV prevalence in groups such as homo/bisexual men, and declining rates in non-injecting heterosexual men attending genitourinary medicine clinics.¹ However, this multicentre study did detect a significant rise in seroprevalence rates in pregnant women in England and Wales and sentinel groups within hospitals in London, warning that changing patterns of HIV infection might account for these variable results. In 1992-1993 a seroprevalence study of adult patients attending the accident and emergency department at St. Mary's Hospital in West Central London showed a rate of HIV-1 infection of 1 in 77.² We have repeated the seroprevalence study over the same calendar months in 1994-1995 to gain further information about HIV positive patients attending the department and to see whether a change in the patterns of HIV infection in the population served by St Mary's Hospital had occurred.

Methods and results

Anonymised blood or urine samples were obtained from 1087 consecutive new patients

attending the accident and emergency (A&E) department at St Mary's Hospital between 14 December 1994 and the 31 January 1995. No repeat samples were obtained from reattendees. The collection and numbering of samples conformed to the requirements of the Health Authority ethics committee. Each patient's sex, age, postal district of residence, general practitioner, and triage group were noted, in addition to whether the patients declared their HIV positivity while in A&E. Data were collected on whether procedures which might involve exposure to blood were performed on each patient and also the subsequent destination of patients (that is, discharged or admitted to medical, surgical, or HIV medicine wards).³ In addition, these details were obtained for patients who did not agree to participate in the study (n = 8, 0.25%). No patients were included in the study who were directly referred to the medical, surgical, or the HIV medicine team. The adequacy of urine and blood samples and the rigorous conditions for testing samples for anti HIV-1 and HIV-2 antibodies (that is, IgG quantitation, enzyme linked immunosorbent assays, and western blotting) were performed as before.² The results of the study are shown in the table. The seroprevalence rate of HIV-1 infection has risen to 1 in 30 for male and female patients

Department of
Accident and
Emergency Medicine,
St Mary's Hospital,
London W2
J Walters
A Cruikshank
R Pollock
P Dendrowskyj
J Fothergill

Department of
Genito-Urinary
Medicine and
Communicable
Diseases, St Mary's
Hospital Medical
School, London W2
M C Poznansky
J Weber

Hepatitis and
Retrovirus Laboratory,
PHLS Virus Reference
Division, Central
Public Health
Laboratory, London
NW9
J V Parry
K Lewis

Correspondence to:
Dr Mark Poznansky, Jefferiss
Research Trust Laboratories,
St Mary's Hospital Medical
School, Praed Street,
London W2 1NY.

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Results of the study

	HIV negative (%)	HIV positive (%)	P value*
Number of patients providing urine or blood samples			
IgG >0.1 mg/ml	1066 (98.2)	19 (1.8)	
Number (%) (95% CI) of men	624 (56) (51.6 to 60.4)	14 (74) (72.9 to 75.1)	<0.001
Number (%) (95% CI) of women	442 (44) (40.9 to 47.1)	5 (26) (25.8 to 26.2)	<0.01
Number (%) (95% CI) of age			
16-25 years	224 (21) (17.5 to 24.5)	1 (5) (4.7 to 5.3)	NS
25-49 years	352 (33) (28.8 to 37.2)	18 (95) (94.0 to 96.0)	<0.001
49-99 years	490 (46) (41.6 to 50.4)	0 (0)	<0.001
Number (%) (95% CI) with GP	757 (71) (66.8 to 75.2)	12 (63) (62.1 to 63.9)	NS
Number (%) (95% CI) foreign visitor	213 (20) (16.7 to 23.3)	4 (21) (20.3 to 21.7)	NS
Number (%) (95% CI) with open wound	181 (17) (13.7 to 20.3)	5 (26)	NS
Number (%) major illness triage category	354 (34)	12 (63)	<0.001
Number (%) declared HIV positive	0 (0)	5 (25)	<0.001
Number (%) admitted under			
Medical team	95 (9)	2 (10)	NS
Surgical team	27 (2.5)	0 (0)	NS
HIV medicine team	0 (0)	2 (10)	NS

CI, confidence interval.

* χ^2 test, df=1.

aged between 16 and 45 in the A&E department, which sees up to 30 000 new patients in this age group per year. No samples were found to be positive for HIV-2 antibodies.

Discussion

The majority of HIV positive patients detected in this study were men aged between 26 and 45 years, who presented to A&E with major illness potentially requiring immediate hospital admission and who did not report their HIV status to A&E staff. The proportion of HIV positive patients who were categorised as foreign visitors had fallen significantly from 75% to 21% ($P = 0.012$) in 1992 and 1994, respectively. The fact that two of the 19 patients detected as HIV positive by this study were admitted to general medical wards with acute illnesses but without knowledge of their HIV status emphasises the importance of carrying a high index of suspicion of HIV infection and

HIV related disease from A&E into the general medical wards.^{4,5}

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