SHORT REPORT

Post-exposure prophylaxis for non-occupational exposure to HIV: current clinical practice and opinions in the UK

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Objectives: To assess the frequency and nature of requests for post-exposure prophylaxis following non-occupational exposure (NONOPEP) to HIV and to describe variations in practice and opinions on the need for its administration at UK genitourinary medicine (GUM) clinics.
Method: A retrospective survey was carried out of physicians representative of all UK GUM clinics using self completed questionnaires requesting information for January to December 1999. The number of requests for NONOPEP, reasons for the requests, the number prescribed, and physician opinions regarding the justification for its administration were noted.
Results: The number of requests and prescriptions for NONOPEP increased fourfold and sevenfold respectively in comparison with a survey from 1997. Of 242 requests, 130 people were prescribed NONOPEP. Half the requests followed sexual exposures between known HIV discordant couples. Requests for NONOPEP were received by 56 of 132 (42%) clinics, with nine clinics receiving over half of them (145/242, 60%). Similarly, over half the prescriptions for NONOPEP (83/130, 64%) were given by six of 39 prescribing clinics. Most physicians thought that post-exposure prophylaxis (PEP) was justified for people exposed to a known HIV positive source patient resulting from sexual assault or unprotected receptive anal or penovaginal sex.
Conclusion: The use of NONOPEP has increased since the last survey and there is considerable variation between GUM clinics in practice and beliefs regarding administration of NONOPEP.

Post-exposure prophylaxis (PEP) for HIV is the prompt administration of antiretroviral therapy in an attempt to prevent the establishment of infection. Based on the results of a case-control study,[1] PEP is recommended for healthcare workers who have been occupationally exposed to HIV, but its provision after non-occupational exposure is controversial because of the lack of data regarding its efficacy.[2 3] It is, however, biologically plausible that antiretroviral therapy could be effective in preventing HIV infections after non-occupational exposures given the evidence for occupational exposures.

Currently in the United Kingdom, there are no specific guidelines on PEP following non-occupational exposure to HIV. Physicians who do administer it use the "Guidelines on Post-Exposure Prophylaxis for Health Care Workers Occupationally Exposed to HIV"[4] or "HIV Post-Exposure Prophylaxis"[5] as a model to assess patient risk and choice of therapy. These guidelines recommend a 4 week regimen of three antiretroviral agents—azidothymidine (AZT), lamivudine (3TC), and indinavir to be commenced as soon as possible after the exposure.

In 1997, the British Co-operative Clinical Group (BCCG) undertook a survey of all genitourinary physicians in the United Kingdom to assess practices and opinions regarding NONOPEP.[6] This report compares the results of a similar survey carried out for 1999 and aims to compare the frequency and prescriptions for NONOPEP between the two surveys. In addition, it describes the nature and circumstances of requests for NONOPEP.

METHOD

A retrospective survey was carried out of managing physicians at all UK GUM clinics using self completed questionnaires inquiring about the period from January to December 1999.

RESULTS

Questionnaires were sent to 213 GUM clinics; 132 responded with a response rate of 62%.

Requests and prescriptions for NONOPEP

Table 1 shows that the number of requests and prescriptions for NONOPEP increased fourfold and sevenfold respectively in comparison with the 1997 survey. For this study period, 242 requests for NONOPEP were reported by 56 (42%) clinics. One hundred and forty five of the requests (60%) were made to nine clinics, six of which were located in the London area.

A larger proportion of people (54%) were prescribed NONOPEP in 1999, and there was also an increase in the proportion of clinics that received requests and prescribed NONOPEP. Of the 242 requests, NONOPEP was prescribed to 130 (54%) people by 39 (70%) of the clinics. These prescribing clinics received 83% (201/242) of all requests, prescribing PEP to 65% (130/201) of them. Sixty four per cent (n=83) of the prescriptions were given by six clinics, four which were located in the London area.

Forty five of the 56 clinics (80%) that had received NONOPEP requests gave a description of the reason for the last request. Most requests came from HIV serodiscordant

Table 1 Comparison of 1997 and 1999 BCCG GUM clinic surveys assessing number of requests and prescriptions for NONOPEP

	1997	1999
	No (%)	No (%)
Requests for NONOPEP	64	242
Clinics receiving requests	29 (21)	56 (42)
Clinics prescribing NONOPEP	13 (45)	39 (70)
Prescriptions given	18 (28)	130 (54)

The number of responses received from GUM clinics for 1997 and 1999 surveys were 135 and 132 respectively.

Table 2 Proportion of physicians* (%) who would administer PEP depending on risk group, activity, and HIV status of the source

		HIV status of source	
Risk group	Risk activity	Positive (%)	Unknown (%)
Male assault	RAS	90	28
Female assault	PVS	89	15
Male	RAS	79	12
Female	PVS	77	2
Male	IAS	73	4
Male/female	Sharing injecting equipment	73	11
Male	PVS	69	1

IAS = insertive anal sex; RAS = receptive anal sex; PVS = peno-vaginal sex; *based on 124 responses.

couples who had either had unprotected sex (13 cases, 29%) or a condom breakage during sex (10 cases, 22%). Another nine requests were after sexual assaults and seven after needlestick injuries from discarded needles or assault with a needle. Other reasons, mostly with partners of unknown HIV status, made up the remaining six requests.

The time interval between exposure and request for NONOPEP was given for 141 requests. The majority of requests were made within 48 hours of exposure. The cumulative numbers (percentages) of requests received within 4, 12, 24, and 48 hours of exposure were nine (6%), 48 (34%), 85 (60%), and 116 (82%) respectively.

Physician opinion for justification of NONOPEP

One hundred and twenty four (94%) physicians responded regarding their opinions on the clinical scenarios justifying NONOPEP. The majority are likely to offer NONOPEP to male and female sexual assault victims of known HIV positive perpetrators (see table 2).

Management of NONOPEP

When asked about preferred NONOPEP treatment regimen, over 75% (95/123) of GUM physicians would prescribe the triple combination of AZT, 3TC, and indinavir. The majority (80%) stated that the length of treatment would be 4 weeks. Sixty one per cent of clinics would not offer PEP if more than 72 hours had elapsed.

DISCUSSION

The number of NONOPEP requests and prescriptions has increased from 1997 to 1999. This may reflect a combination of increasing public and physician awareness, risky sexual behaviour, and access to PEP. There is considerable variation in the practices and opinions of GUM clinics and physicians regarding NONOPEP for HIV with differences in opinion regarding the combination of drugs for PEP, the maximum time allowed to elapse from time of exposure, and whether NONOPEP was justified at all. This is not surprising, given the lack of specific guidelines—even where guidelines exist for the management of occupational exposure to HIV there is considerable variation in practice between hospitals.[7]

Most NONOPEP requests and prescriptions originated at London GUM clinics. This is in keeping with the higher population and prevalence of HIV in the area (63% of those living with diagnosed HIV in the United Kingdom are resident in London and 67% are treated there [8]).

Of the clinics that received requests for NONOPEP, 36% of requests were following unprotected sexual intercourse (excluding condom breakages). This proportion is surprisingly low given the concern that NONOPEP is being adopted as a mode of HIV prevention.[9] A recent study showed that the availability of PEP was not related to an increase in high risk sexual behaviour[9 10] but recommended that ongoing surveillance was important to monitor trends. The implementation of a NONOPEP surveillance system would also be useful to determine utilisation, effectiveness, side effects, and failures of therapy.

One of the limitations of the study was the fairly low (62%) response rate. The results may be subject to bias with more physicians having an interest in NONOPEP completing the questionnaires. In addition, the reasons given for NONOPEP requests were assessed in a limited and subjective manner, relying on the physician's description of the last encounter. The description of the last request only gives a snapshot view of the reasons, and it would be more useful to know the range of reasons. The collection of such data would be facilitated with the implementation of a surveillance system, collecting data such as the number and reasons for request, whether NONOPEP was given, and completion rates and side effects of therapy.

CONCLUSIONS

The variation in the practices and opinions among GUM physicians highlights the need to develop standard guidelines to facilitate the decision whether or not to prescribe NONOPEP. If this is not possible because of a lack of consensus, the development of a standard set of questions for clinicians to ask when NONOPEP is requested would be useful. (This is broadly in line with the policy CDC has recommended in the United States.[11]) The decision on whether or not to prescribe NONOPEP is then made in consultation with the patient.

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Conflict of interest: none

CONTRIBUTORS

CG analysed the data and wrote first draft and final version of paper; RM and CC contributed to original survey/study design and reviewed the paper; BE provided advice on data interpretation and reviewed the paper at all stages making major editorial changes between first and final versions.

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REFERENCES

1 **Cardo D**, Culver D, Ciesielski C, *et al*. A case-control study of HIV seroconversion in health care workers after percutaneous exposure. *N Engl J Med* 1997;**337**:1485–90.
2 **Desmond N**, Coker R. Should preventive antiretroviral treatment be offered following sexual exposure to HIV? The case for. *Sex Transm Inf* 1998;**74**:144–5.
3 **Evans B**, Darbyshire J, Carteledge J. Should preventive antiretroviral treatment be offered following sexual exposure to HIV? Not yet! *Sex Transm Inf* 1998;**74**:146–8.

4 **UK Health Departments**. *Guidelines on post-exposure prophylaxis for health care workers occupationally exposed to HIV*. London: Department of Health, 1997.
5 **UK Health Departments**. *HIV post-exposure prophylaxis: guidance from the UK Chief Medical Officer's Expert Advisory Group on AIDS*. London: Department of Health, July 2000.
6 **Kinghorn GR**, Evans B, Nunn A, *et al*. Post-exposure prophylaxis (PEP) after non-occupational risk of HIV infection [letter]. *Sex Transm Inf* 1998;**74**:304.
7 **Sidwell R**, Green J, Novelli V. Management of occupational exposure to HIV- what actually happens. *Comm Dis Pub Hlth* 1999;**2**:287–90.
8 **CDSC**. AIDS and HIV Infection in the UK: monthly report. *Commun Dis Rep CDR Wkly* 2001 [serial online];11 (17): Available at www.phls.co.uk/publications/cdr
9 **Waldo C**, Stall R, Coates T. Is offering post-exposure prevention for sexual exposures to HIV related to sexual risk behaviour in gay men? *AIDS* 2000;**14**:1035–9.
10 **Dilley J**, Woods W, McFarland W. Are advances in treatment changing the views about high risk sex. *N Engl J Med* 1997;**337**:501–2.
11 **Centers for Disease Control and Prevention**. Management of possible sexual, injecting-drug-use, or other non occupational exposure to HIV, including considerations related to antiretroviral therapy. *Morbid Mortal Wkly Rep* 1998;**47**(RR-17):1–14.

ECHO

Thinking globally

Please visit the Sexually Transmitted Infections website [www.sextransinf.com] for link to this full article.

Penicillium marneffei is extremely rare in Britain, but it is the most common secondary pathogen in patients with HIV who are native to, or have travelled in, South East Asia and South China. Doctors would do well to remember this, as this case report from Britain shows.

Bateman *et al* were confronted with a Thai woman aged 29 admitted after three weeks' cough and feeling generally unwell eight months after moving to Britain from North East rural Thailand. She had facial skin lesions, lowered air flow into the upper left lung, and a swollen liver and spleen but no apparent risk factors for HIV infection. Initial tests for likely bacterial pathogens were negative. Sputum smears showed no tumour cells or mycobacteria, but bronchoscopy showed yeastlike organisms in the lavage fluid. The woman died suddenly four days after admission, before tests for HIV status and for other possible pathogens could be done.

Necroscopic findings confirmed HIV infection and showed left lung consolidation with a single large cavity and multiple lesions throughout the colon. Histologically, budding yeast forms were widely disseminated in multiple organs. A fungus—*P marneffei*—isolated from lung and bone marrow and seen in the CSF was the cause of the woman's recent chronic ill health and would itself have proved fatal without the added burden of sepsis with *Salmonella enteritidis*, isolated from the blood, spleen, bone marrow, and CSF.

P marneffei infection is treatable and needs to be distinguished from mycobacterial infections, visceral leishmaniasis, and histoplasmosis.

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